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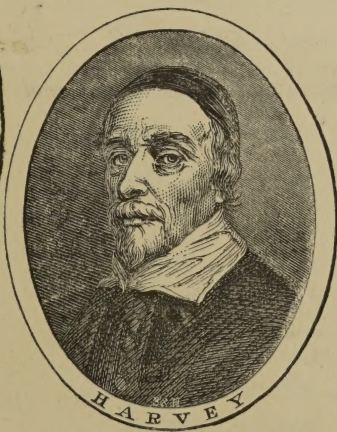
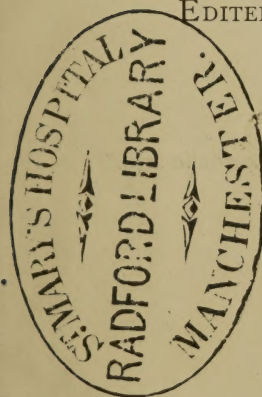
THE
OBSTETRICAL JOURNAL

OF
GREAT BRITAIN AND IRELAND

INCLUDING

Midwifery and the Diseases of Women and Children

EDITED BY J. H. AVELING, M.D.



VOL. II

APRIL, 1874, TO MARCH, 1875

LONDON

J. & A. CHURCHILL, NEW BURLINGTON STREET

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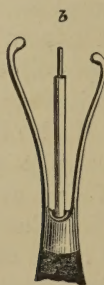
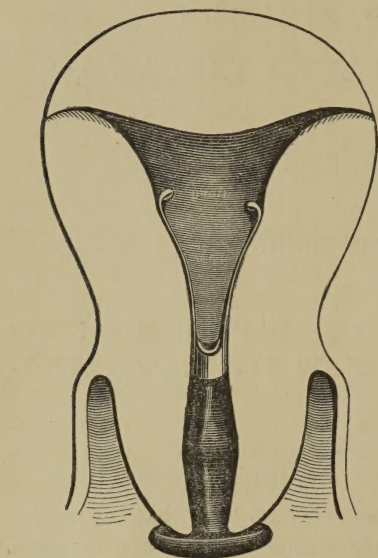
By GEO. GRANVILLE BANTOCK, M.D.
Physician to the Samaritan Free Hospital for Women.

NO. XIII.—VOL. II.

B

body, that the limbs first became straight, then the instrument made a quarter turn, and ultimately the limbs became bent in one direction by the force of the flexion, giving one a tolerably accurate cast of the degree of flexion and the

curved form of the uterine cavity. Such a result is impossible with the metal limbs, and the instrument at once adapts itself to the uterine cavity in its normal direction, in which it is retained as represented in the engraving. The object of the canal is to allow the uterine discharges free exit; and if it be deemed advisable to wash out the uterine cavity, it can be done by passing a No. 1 or 2 catheter, which leaves sufficient room for the returning stream. While on the one hand there are some practitioners who deny the existence of flexions of the uterus, and there are others who deny their influence in the causation of dysmenorrhea and other distressing symptoms; on the other hand there are some who, while



recognising the existence of flexions and their consequences, will not admit that intra-uterine stems are advisable, or even go so far in their opposition as to regard them as dangerous. Now I am one of those who not only recognise the existence of flexions and their attendant symp-

toms, but am convinced that there is no method of treatment at once so scientific and beneficial as that by intra-uterine stem. There may be, and are, differences of form ; but the principle is admitted and is the same. I have never known any injurious results follow their proper use, while I have abundant evidence of the benefit to be derived from them. The mildest accusation I have ever heard urged against them is that they produce hypertrophy of the uterus. I can only say that I have not seen such a result.

The following case appears to me to illustrate both its improper and proper use :—

K. C., aged twenty-three, came under my care three years ago, as an out-patient, at the Samaritan Free Hospital, suffering from severe dysmenorrhea, the result of a very acute anteflexion, together with other symptoms which frequently attend it, such as leucorrhea, dysuria, hypogastric pain, &c. All the means I could employ failed to give her relief. She had the cervix subsequently divided. This was attended with relief in her first recurring period, showing that the obstruction to the escape of the menstrual fluid, resulting from the flexion, was the cause of the dysmenorrhea. The healing process having been completed, and the canal having again become narrowed, the dysmenorrhea returned at the next period. An attempt was now made to introduce one of Dr. Meadows's glass stems ; but the passage was found too small at the internal os, and it was again divided so as to admit the stem, which was then and there inserted. The result of its introduction under these circumstances was a severe attack of metritis, which necessitated its removal, and the last state was worse than the first. In due time she returned as an out-patient, all symptoms much aggravated : considerable congestion, free uterine leucorrhea, greater dysuria, and more hypogastric distress. The flexion was as acute as ever, and the introduction of the sound caused intense pain. Repeated small local bleedings, chalybeate salines, and topical medication, chiefly lunar caustic, reduced the congestion and leucorrhea ; but the dysmenorrhea continued unabated, and the periods were excessive both in quantity and duration, lasting nine or ten days, sometimes even more. Under these

unfavourable circumstances, and with some misgivings, as to the result, I determined to try an intra-uterine stem.

The following is from my notes :—

June 4th, 1872.—"A small laminaria tent passed into the uterus with difficulty. 6th.—The tent having partially slipped, and having only dilated the external os, introduced another. 7th.—Introduced a stem pessary. 8th.—The pessary slipped out, owing to excessive dilatation by tent. Reintroduced stem. 10th.—Severe pain; no evidence of inflammatory action. $\frac{1}{4}$ gr. morphia by subcutaneous injection in arm. 14th.—Very little pain. Takes 5 gr. comp. soap pill every night. Uterus inclined to anteversion; less frequent micturition." The patient was kept on her back, and opportunity was taken when examining to bring the neck forward so as to keep the uterus upright; but as it still tended to become anteverted, a modified Hodge was introduced, and it was thus kept in position. At the end of three weeks I allowed the patient to walk about her room, and in another week she returned home. In the meantime she had passed a menstrual period with much less pain than usual. At the end of six months—viz., in January, 1873, I removed the instruments, the periods being regular and painless. She continues free from dysmenorrhea. The uterus is in very fair position. There is no dysuria, leucorrhœa, nor hypogastric pain. The periods last four to five days, and the quantity is normal.

I am well aware that it is the constant practice of some practitioners to introduce a stem immediately after division of the cervix, but I believe such practice to be fraught with danger, and I prefer to allow the healing process to be accomplished (assuming the necessity of division in such cases, which I do not grant) before introducing the stem. In the case I have just related there can be no doubt that the metritis was due to the introduction of the stem immediately after division (I have under my care at the present time a similar case). Whether this was due to the direct irritant action of the stem, or to this combined with the retention of discharge and the want of provision for its escape other than between the instrument (which was solid) and the

uterine walls, I am not prepared to say. That the uterine tissues relax around a foreign body which occupies its cavity is a well known fact, but under the increased vascularity and swelling which result from the infliction of a wound, as in division, it is at least doubtful whether such a thing is possible. It is more probable that the swelling of the parts, if it does not prevent, lessens this relaxation, and hence retention of discharges and its attendant consequences. That division of the cervix will not cure an anteflexion, I have long been aware, but that it will remove the resulting dysmenorrhea I have also proved, if care be taken to secure continued patency of the canal, and especially of the internal os, by appropriate after-treatment. Nor is there much to be hoped for from the use of vaginal pessaries, applied with the view of keeping the uterine body off the bladder (in the case of anteflexion). The effect is simply to cause the uterus to rotate around the axis formed by the floor of the pelvis, where the body joins the neck, and where it is as it were "stuck in," as any one can prove for himself by tactile examination. The following case appears to me worthy of record :—

A lady, aged eighteen, came under my care in February, 1870, a few months after her marriage, suffering from menorrhagia with severe dysmenorrhea. The menstrual flow had always been free, and she had more pain than is usual, but since her marriage both had increased and now demanded treatment. A short course of gallic acid considerably diminished the menorrhagia. After this I did not see her till March, 1871, when she again came under treatment, the menorrhagia having returned and the dysmenorrhea, which had not been relieved, having become more severe. I then insisted on an examination, when I found the uterus acutely anteflexed and the left ovary bulky and tender. There was also considerable leucorrhea without excoriation. Ammon. chlorid. had a decided effect in relieving a constant pain felt in the region of the left ovary, but *cannabis indica* at the periods with gallic acid in the intervals failed to relieve the dysmenorrhea and menorrhagia. I then (in May) after a menstrual period, suggested the use of a sea-tangle tent to

open up the internal os, as the passing of the sound caused severe (dysmenorrheal) pain. Two tents, with an interval of one day between, were used, and the internal os was well opened up. I well remember the great difficulty I had in getting a fine tent through the internal os past the flexion, which was so acute as to require a very sharp curve in the sound for its introduction. The flexion was in no degree lessened by this procedure, although her next period was attended with little or no pain. On June 20th I passed another small tent, and on the 22nd I introduced one of my new intra-uterine vulcanite stems. This was worn till the following November, not only without discomfort, but with great relief to the dysmenorrhea. I then removed it and found that the instrument was faulty in its construction, for the limbs were together and both bent in the same direction, presenting a good illustration of the degree of flexion. The result was not satisfactory, for although the menorrhagia was relieved, the dysmenorrhea was not cured. (About the same time there was the like result in a case of retroflexion amongst my hospital patients.) I then had the limbs made of German metal, and as the flexion remained, and the dysmenorrhea threatened to return in its old severity, I resolved to try one of the new stems. I had no difficulty in introducing it, and she wore it for four months, at the end of which period I removed it in consequence of slight pain felt after a severe jolt in a carriage, and as I feared some injury might have been done in the cavity of the uterus. During the four months the patient menstruated in normal quantity, and *without any pain*, though the flexion was still distinguishable after the removal of the stem. In the beginning of this year, fearing from some threatenings of pain that the dysmenorrhea was about to return, the patient again begged me to insert the stem. I introduced it on January 22nd, and she now (March) wears it without the slightest discomfort, menstruating without pain. Before introducing it I ascertained that the uterus was still flexed, but the sound passed with the greatest facility, and the stem without difficulty.

A lady, aged thirty-two, unmarried, who had long suffered from dysmenorrhea, and at her menstrual periods was subject

to attacks of hysterical epileptiform convulsions, came under my care in January, 1871. I first saw her after slipping down stairs and falling heavily on the buttocks, when she was suffering so severely that I had to inject subcutaneously a quarter of a grain of morphia. Though suffering so severely that she required repeated opiates, she for some time objected to an examination, but was at last prevailed on to submit. I found, as I had anticipated, an acute anteflexion, without any other derangement of the uterus beyond slight congestion. She would not then submit to local treatment, and I had to be satisfied with prescribing bromide of potassium as the chief remedy. In February, 1872, finding that she made no progress, she resolved to try the treatment I had suggested. During the intervening twelve months she had a recurrence of the attacks of varying intensity. The periods returned with tolerable regularity, but the intervals were longer than normal and the flow lasted scarcely two days. Chloral was tried but was speedily rejected by the stomach, and other anodynes did not afford sufficient relief to her sufferings. On February 8th, 1872, I passed a fine sea-tangle tent through the internal os, leaving it for twenty-four hours, and on the 10th I introduced an intra-uterine stem. The uterus became anteverted, and I adapted a Hodge's pessary, somewhat resembling Graily Hewitt's cradle pessary, to support the uterus in a more upright position. After three days' confinement to bed the patient was allowed to get up, and she soon resumed her household duties. These she performed with complete comfort. The periods recurred with great regularity every month; the flow lasted four days in normal quantity and *without any pain whatever*. At the end of four months she again slipped downstairs, and after suffering from considerable pain for a few hours the stem came out. While she wore the stem she remained free from the hysterical convulsive attacks.

Dr. Savage, of Birmingham, in a paper published in this Journal for November, 1873, asks for an answer to the question, "Why does the stem remain *in situ* in some cases and come away in others?" My experience answers it thus:—If the uterus becomes anteverted on the introduction

of the stem, the pressure of the posterior wall of the vagina keeps it *in situ*; if, on the contrary, the uterus becomes retroverted, the bulb is exposed to the contractile action of the vagina, which in the downward and upward movements of the uterus in the act of respiration, permits the descent of the bulb, but prevents its return, and this, aided by the expulsive action of the uterus, pulls out the stem. The same thing happens, and with greater intensity, under the influence of a fit of coughing, or a sudden jerk, as in falling on the buttocks, which forces the uterus further into the vagina; then, on its return, the bulb is either retained by the contraction of the vagina or by hitching against a fold of the mucous membrane. This explanation holds good in the cases which have come under my observation. In no case in which the uterus became anteverted has the stem come out, unless it has first become retroverted, while in several cases in which the stem has slipped out I have found the organ previously retroverted. To prevent this accident I am now in the habit of employing Hodge's pessary when I find a tendency to retroversion. I have tried the diaphragmed instrument introduced by Dr. Wynn Williams, but have discontinued its use for three reasons:—1st. That it causes retention of menstrual and utero-vaginal discharges, which, becoming offensive and irritating, set up vaginitis. 2nd. Because it pushes up the uterus, causing pain; and, 3rd, because the bulb of the stem slips over the smooth surface of the india-rubber diaphragm. I have seen the bulb slip from the posterior cross-bar close up to the anterior—*i.e.*, from complete anteversion to retroversion, and *vice versa*. When a Hodge's pessary is introduced, the limbs or longitudinal bars pass one on each side of the cervix above the level of the os, while the posterior transverse bar rises up behind the cervix so as to support the body while at the same time it pulls the cervix backwards. The diaphragm, on the contrary, prevents the descent of the cervix, and does not allow the posterior transverse bar to rise up for the support of the body. If the pessary be not large enough to occupy the vagina in its length it becomes tilted forwards or backwards, according to the tendency of the uterus to retroversion or anteversion.

Such at least is the result of my experience, and Dr. Williams as much as admits the last objection, for he has modified his instrument by adding a socket for the bulb to rest in. This increases the force of my first objection, and it does not allow sufficient descent of the cervix to overcome the second.

(To be continued).

NOTE ON OBSTETRIC SUPERSTITION.

By 'EDWARD MALINS, M.D.

Honorary Medical Officer to the Birmingham Lying-in Charity.

THE present age is considered to be one essentially of progress and enlightenment. It is curious, however, to observe that all remnants of superstition are not yet extinct, and that ever and anon they crop up as weeds in the garden of culture. Thus it is evident that in the midst of our civilization and accredited knowledge there exists a necessity for the diffusion of further intelligence to dissipate the ignorance of the past and allow the truth to grow predominant and unrestrained.

In a short holiday to the neighbourhood of Bristol last autumn I found a singular instance of the desire to perpetuate the errors of a former period, and an appeal to sustain the credulity of a darker age strikingly evinced in the following advertisement from the *Bristol Times and Mirror* for September 30th, occupying a prominent place on the front sheet.

“TO SEA CAPTAINS: For sale, a Child's Caul in perfect condition.
£5.—O. H., Bath Post Office. 2554.”*

This superstition has existed from very early times, and the various imaginary virtues which have been attributed to this bit of membrane, have differed with every age and place. It is mentioned in the fourth century by Ælius

* As much as thirty pounds was sometimes paid for a caul. In the *Times*, May 8th, 1848, is the following: “A child's caul. Price six guineas. Apply at the bar of the Tower Shades, corner of Tower Street. The above article, for which fifteen pounds was originally paid, was afloat with its late owner thirty years in all perils of a seaman's life, and the owner died at last at the place of his birth.”—ED. O. J.

Lampridius, in his life of the Emperor Antoninus Diadumenianus. Majolus also attributes to the Roman lawyers the belief that the possession of a child's caul would make them eloquent and triumphant. It is mentioned by St. Chrysostom. In France the superstition has been long prevalent. "Etre né coiffé," "to be born with a caul," has been long considered a favourable omen, and accounted a guarantee of good fortune. It is stated by Grose that a person possessed of a caul may know the state of health of the party who was born with it: if alive and well, it is firm and crisp; if dead or sick, relaxed and flaccid. Ben Jonson, in "The Alchemist," makes Face say to Dapper—

"Yo' were born with a cawl o' your head."

Hood also seems to have been aware of the popular recognition of its value, which he combats in the tragic event which subsequently happened to its possessor—

"But still that jolly mariner
Took in no reef at all,
For in his pouch confidingly
He wore a baby's caul."

In former days it was also considered the perquisite of the midwife, who often traded upon the privileges it was presumed to confer upon the owner as a charm against drowning, and she frequently obtained a high price for parting with it. We must hope that the latter explanation was the cause of this advertisement, and in taking this view indicate the desirability of extending a sounder education to that class of practitioners. It may be that the light of knowledge has not yet sufficiently penetrated into "the far West" to sweep away all such abuses of the past, and this example of lingering ignorance may still be an acknowledged source of emolument to a deserving attendant upon cases of midwifery. The efforts to improve the practice of those indulging in commercial transactions with such relics will not be in vain, should they result in the banishment of such intimations from the columns of a newspaper with a widespread circulation.

INFLUENCE OF BROMIDE OF POTASSIUM UPON MENSTRUATION.

By DOCTEUR A. CORDES, Geneva.

I HOPE the following case may have some interest for your readers, proving as it does that the bromide of potassium has a direct and powerful action on the female generative organs.* I translate from the patient's mother's own words the following brief sketch of her daughter's antecedents :—

M. F. was born a twin, the mother being seven and a half months' pregnant. Her weight at birth was one pound and a fourth (Swiss weight, 625 grammes). When five months old she was taken out from the cotton wool in which up to that time she had been wrapped, and was dressed after the usual manner. At seven months she weighed five pounds, and at eleven months seven pounds. At nine months she was vaccinated ; at eighteen months the first tooth appeared ; at twenty-one months she was weaned ; at twenty-eight months she began to walk alone. When three years old had measles, and at five hooping-cough. Sometimes she had suffered from rheumatism in the foot. When fourteen years and three months old, without any warning or malaise of any kind, she menstruated for the first time. As menstruation occurred every three weeks, a physician was consulted, who endeavoured to establish the right interval between the periods by giving preparations of iron, but without the desired effect.

I undertook the treatment of this case just one year after the first appearance of the catamenia. The girl was rather thin and small according to her age, but looking healthy. Five grammes of bromide of potassium were divided into twenty doses, one of which was given twice a day, beginning eight days before the supposed epoch—*i.e.*, two weeks after the beginning of the last period, and stopping when the catamenia appeared. Under this treatment she became

* "Traitement des Accidents Nerveux de la Grossesse." Par A. Cordes. 1869.
P. II.

quite regular, the periods coming on every four weeks, but as soon as the use of the bromide of potassium was suspended, the epochs again returned every twenty-one days.

March 4th.—Has now been under treatment about six months, and is still taking bromide of potassium *ut supra*.

CASE OF SUSPENDED ANIMATION IN A NEWLY-BORN CHILD FOR A PERIOD OF TWO HOURS.

By GEORGE MYLES, L.R.C.P.

Visiting Physician to the Limerick Lying-in Hospital, &c.

I WAS called on December the 11th, 1873, to see Mrs. O'N., primipara, healthy, and aged twenty-three. She was taken in labour early in the morning of the 11th. I was sent for at 10 A.M. and found the parts relaxed, the os uteri open to the size of a crown, and the pains strong and frequent. I left and returned after two hours, at which time the os was fully opened, and the child was born at the end of half an hour. It did not attempt to cry or breathe. There was no pulsation of the funis, so I left the child attached to the mother for ten minutes, at the end of which time the placenta came away. I then tried to restore the child by means of artificial respiration, warm bath with whisky added, and friction of whisky to the chest and back. At the end of the first hour the child began to breathe at the rate of five respirations in the minute. I still persisted, and after two hours I handed the child to the mother breathing naturally. I may say my only hope for continuing the treatment so long was hearing the pulsation of the heart. The resuscitation was not however permanent, for at the end of forty hours the child died of convulsions.

Reports of Hospital Practice.

SAMARITAN HOSPITAL FOR WOMEN.

THREE CASES ILLUSTRATING SOME POINTS IN THE DIFFERENTIAL DIAGNOSIS OF OVARIAN DISEASE.

*Under the care of C. H. F. ROUTH, M.D., Senior Physician
to the Hospital.*

THE three following cases of mistaken ovarian disease exemplify an interesting point of practice—namely, that cancer of the omentum frequently, by its connexion with the ascending, transverse and descending colon, brings about such an adhesion to the abdominal parietes that a pseudo cyst is formed, which containing fluid is in many cases not to be differentially diagnosed from ovarian disease.

CASE I.—E. C., aged fifty-six, was admitted under my care, Feb. 3, 1871, suffering, as it was stated, under ovarian dropsy. Nine months ago she was quite well, then began to feel pain after eating, and also suffered from generally “bloated” sensations (to use her own words), over the abdomen. These feelings generally disappeared after walking about a little. On the 4th of October she felt something like a little lump on the left side, which gradually enlarged. For the last twelve weeks the abdomen had increased immensely in size, while there had been also more severe gastrodynia. No womb symptoms were remarked by herself. Complains of a good deal of pain in the superior parts of the abdomen. Dulness begins one inch above umbilicus, but there is no pain here. Bowels more or less constipated, no bloody evacuations. Liver dulness not more than two inches altogether from above downwards. Both lumbar regions clear. The dulness on left side low down extends to two inches from the pubic symphysis of that side. Fluctuation very evident, producing the same note on percussion wherever tried. The examination of her vagina revealed nothing very

remarkable. The os was closed, so that the sound could not be admitted. The uterus itself appeared small and shrivelled.

So far the history and examination pointed to what was probably an ovarian tumour on the left side. There might also be ascites ; but if so it was moderate in quantity. The fluid appeared to be bound down in some sac.

On the 4th the patient was tapped, and several pints of a dark clear fluid were removed. This was followed by great relief of all the symptoms. After the tapping a rounded tumour, about the size of a child's head, was felt in the left iliac region, apparently unconnected with the uterus.

For several days after the operation there was a good deal of abdominal pain, which required full doses of morphia and general counter-irritation. Ultimately, on the 9th, as it did not seem to yield, liquid blister was applied to the abdomen. This proved effective. On the 15th, however, the old symptoms of gastrodynia, which had been on the decrease, were severe, and a bismuth mixture was added, with narcotics. The abdomen was rapidly filling. Subsequently foxglove and other diuretics were tried, but with little effect. On the 19th calomel (gr. $\frac{1}{2}$) and opium (gr. $\frac{1}{2}$) were ordered every three hours. This relieved the pain. On the 23rd it was stated to be gone, but the sickness had set in again, and the "bloated" feeling in the belly was once more prominent. Bismuth mixture again added.

March 9th.—The report states that she is evidently sinking. Facies Hippocratica present ; visibly thinner. No actual pain ; but much discomfort from the belly, which is both filling with fluid and tympanitic superiorly. Pulse very weak. All further efforts to make her rally failed. Died next day.

On opening the abdomen it was found generally matted together by cancerous masses here and there, extending along the colon continuously round, beginning at the cecum. Cecum was itself much inflated, uterus large, and ovaries matted superiorly together. Mesentery everywhere studded with cancerous matter. The lungs were not allowed to be examined. The right leg was a little edematous, not the left.

CASE II.—E. G., aged thirty-six, was admitted under my

care at the Samaritan Hospital, Oct. 26th, 1867. Married nine years, but only one child, and that seven years ago. No miscarriage. Regular ; saw catamenia last month. They began when she was seventeen. Duration one week : not more copious lately than before. She complains of an enlarged abdomen, painful especially at night. First noticed the enlargement nine weeks ago, coming on with general abdominal pain, but no shiverings or fever. Has gradually enlarged since. The swelling seemed to begin on the left side by a small lump, as before said, only nine weeks back. It does not interfere with her walking, but she feels generally weaker. She looks very thin and emaciated, pale, somewhat sallow.

Abdomen fluctuates, specially inferiorly—fluid very evident here. Dulness on percussion extends three inches above umbilicus, nor does it change with position of body. Measurements : 15 inches from ensiform cartilage to pubis ; between anterior superior spinous processes, eighteen and a half inches ; around the body over umbilicus, thirty-three inches. Both lumbar regions clear : left not so much so, although the clear sound extends far back. Fluid appears very thin ; tumour uniform ; uterus very little moveable, rather anteverted, tumour extending all round it, but free from pain on examination. Sound does not penetrate more than one inch. Posterior part of tumour seems fixed.

This case was seen by several of the staff, and diagnosed as left ovarian dropsy. Mr. Spencer Wells, who also saw it, inferred it was unilocular, not an ovarian, but an extra-ovarian cyst, from the rapidity of its growth and fixity of the uterus, through the expansion of the broad ligament. Tapping was recommended as offering a probable means of cure. She was consequently tapped on November 6th. The fluid which exuded closely resembled ascitic liquid. The second day after the tapping she began to suffer from low peritonitis. There was also sickness and vomiting. Creosote and strychnia mixtures, and afterwards champagne, were tried in their turn, but with questionable benefit. One grain of colocynth was now given every three hours, at Dr. Savage's suggestion, and for a day or two it seemed to do good. Then the sick-

ness returned, and fearing she was about to die, she left the hospital.

Her fears proved correct, and she died at her own house November 25th. I made a post-mortem examination. It was neither ovarian nor extra-ovarian, but cancer of the great omentum, but chiefly along the upper surface of the colon. The colon was bound tightly all round, and fluid was contained in the space enclosed, limited on the three sides by the ascending, transverse, and descending colon, inferiorly by the bladder, and superiorly by the abdominal parietes; so that in this manner a pseudo cyst was formed, which gave the idea of an ovarian cyst.

CASE III.—Mrs. E. M., aged fifty, married, was admitted under my care at the Samaritan Hospital. She had been suffering from abdominal dropsy for five years. On one occasion the abdomen had burst at the umbilicus, and she then recovered. She had been tapped three or four times since. The last time was at a large general hospital, and after tapping she was carefully examined, and the disease pronounced to be ovarian. This was about a month ago. She left the hospital in question owing to some disturbance, but the abdomen beginning to fill rapidly, sought admission into the Samaritan. She looked very ill and pale and was very short-breathed. Could not lie on the right side, nor flat on the back; was obliged to lie in the semi-recumbent position. Pulse very weak and feeble. Is quite unable to walk, and appears much fatigued by her drive.

The abdomen was so large and tense that no exact examination of the internal viscera through the abdominal parietes was practicable. She measured fifty-seven inches round the body over umbilicus, and twenty-seven inches from the pubis to the epigastrium. Skin over the umbilicus was very thin, as if it would shortly burst. The epigastric and iliac regions were everywhere dull. Above, near the epigastrium and in both lumbar regions, the sound was clear.

As immediate relief was necessary, she was tapped the same day. Forty-five pints of clear green fluid were withdrawn. The operation was necessarily at first begun while

she was sitting up, but gradually she was made to lie down. But with the utmost care taken, she was greatly exhausted by the tapping. Brandy was freely given. Three hours after she had rallied : pulse was good, but the abdomen, which was inferiorly and on each side tympanitic, was so tender on touching that no further examination could be made.

She died the next day. At the post-mortem examination the abdomen was found to contain six to eight gallons of fluid. There was no ovarian disease to any extent, although one of the ovaries was slightly enlarged. There was no peritonitis, but a large adhesion as thick as the finger attaching the upper part of the intestines to the sides of the abdominal parietes. The liver was very large and cancerous throughout, adherent to the diaphragm. Heart large. Both lungs in first stage of pneumonia. Womb healthy.

Remarks.—These three cases, although all unfortunate in their results, all three being of a cancerous nature, illustrate this point of practice—that where you have adhesions of the colon especially, as in the first two cases, and particularly if the induration is more marked on one side, it is extremely difficult, if not absolutely impossible, to diagnose the pseudo cyst thus formed from a real ovarian or extra-ovarian cyst. The nature of the fluid drawn after tapping alone might assist. It is just possible in the third case, if a proper examination could have been made, a more correct diagnosis might have been arrived at ; but in all three, nevertheless, ovarian disease was made out by competent observers, which the post-mortems disproved.

General Correspondence.

ON THE ANATOMY OF THE HUMAN PLACENTA.

(To the Editor of "*The Obstetrical Journal*.")

I AM sorry again to have to ask for a small space to correct Dr. Snow Beck's misinterpretation of my paper on the anatomy

of the human placenta in the *Transactions of the Obstetrical Society*, 1872. In your January number I corrected three important mistakes which he had made, accompanied by epithets which he affects to call "plain speaking." One of these errors he has repeated, but he also adds another. The one he has reiterated is, that I have stated that there is a delicate membrane between the uterus and placenta; but now he adds more, and asserts that I say "that this membrane spreads between the placenta and uterus, preventing any direct communication between the cavernous structure and the canals of the uterine sinuses."

These are neither my words nor thoughts, nor have I anywhere made use of any which can possibly bear this interpretation.

The delicate membrane of which I have spoken is the wall of the sinuses, and of the dilatation of the curling arteries on the inner surface of the decidua and its processes; and also of the wall of the sinuses of the uterus which occasionally abuts on the line of separation, so that being unprotected by uterine tissue, when the placenta is shed, it possibly may give rise to a large rush of blood if it gave way, and at the same time the uterus were relaxed.

The last and fourth misinterpretation that Dr. Beck has made is, that I have described another class of veins which accompany the utero-placental arteries. I have done nothing of the kind, nor have I given any drawings which can be so construed. Again I must ask those of your readers interested in the matter to read the paper and judge for themselves, and not to take Dr. Beck's interpretation of it as mine, for in every instance he has attributed to me opinions I have never held. Surely I have a right to claim from one who professes to be so infallible and accurate, some slight degree of care in reading; and certainly not a repetition of these assertions with an assurance which has the appearance of being based on reality.

J. BRAXTON HICKS, M.D., F.R.S.

[This letter was received too late for insertion in our last number.—ED. O. J.]

DR. SNOW BECK'S CASES OF POST-PARTUM HEMORRHAGE.*

(To the Editor of "*The Obstetrical Journal*.")

SIR,—In your last number (February) there appear some surprising cases from the pen of Dr. Snow Beck. How or where he got possession of the notes of these awful cases, presuming they did not occur in his own practice, is very astonishing.

They are, however, brought so prominently before the profession, and so particularized, that they must be admitted to represent something—either fact or fiction; *i.e.*, they are well observed and faithfully recorded cases, or they are the emanation of a highly endowed and more highly cultivated (but perverse) imagination. If the former, then a wondrous light is thrown on the *kind* of obstetrical teaching practised in *some* of our schools. (It is taken for granted, of course, that "physician-accoucheur" means an hospital physician-accoucheur; hence a teacher of obstetrical science.) If the latter, then a more iniquitous and abominable libel it is impossible to conceive, and one which loudly calls for that just retribution it so richly merits. At page 717, Dr. Beck's report states that "She was very well in general health." . . . "Lingering pains commenced about 5 A.M." . . . The physician-accoucheur engaged to attend her was not sent for until 10 A.M. He said she was going on well. Ordered champagne and food to be taken. "At twelve o'clock the physician-accoucheur returned, and in consequence, he said, of finding her so low, administered chloroform, applied the forceps, and at 1 P.M. extracted the child." . . . "At the end of half an hour the afterbirth was removed. About ten minutes after the removal of the afterbirth flooding of a bright red blood began in torrents—'it simply poured out.' Ice was freely passed into the *vagina* until it would not admit any more; all the clothes were taken off the bed, and ice applied to the outside of the abdomen; the doors and windows were opened; and another physician-accoucheur was sent for. After his

* This letter arrived too late for insertion in our last number.—ED. O. J.

arrival the galvanic battery was used, but without effect. The body was now stripped naked, and water poured upon the abdomen from a height until the bed and the room were swimming with blood and water. Quantities of brandy were given as long as she could swallow; when she could do so no longer, brandy and ergot of rye were twice injected into the stomach. But the hand of the accoucheur was never passed into the uterus after the hemorrhage had commenced; nor was any pressure at any time applied to the uterus from the outside of the abdomen; when about 3 P.M. the lady was declared dead, but continued to gasp at intervals until 4 P.M."

Whether this record be false or true it cannot but be regarded as the most appalling picture that ever appeared in a public journal, and as such cannot possibly, I hope, be permitted to pass unnoticed by those gentlemen whose professional characters are so roundly assailed. In the meantime I should like to be permitted to make a few remarks upon this case in its present aspect. In the first place it will be observed that the lady was in good general health, in her fortieth year, at full term with her seventh child; that her pains came on naturally; that there was nothing very *unusual* may be inferred from the fact, that they (the pains) began at 5 A.M., the doctor not being sent for until 10 A.M. When he arrived he expressed his opinion that the patient was doing well, ordered her champagne and food, and as nothing is said to the contrary, it is to be supposed he left the house, clearly indicating that in his judgment the patient's progress was in every respect satisfactory. At twelve o'clock he again returned, without being sent for, it would seem, and found the patient "so low" that the administration of chloroform and instrumental delivery were at once determined upon and as promptly carried into effect. It would appear that this poor lady was "so low" that there was not even time (at twelve o'clock in the day) to admit of a short consultation, which *might*, perhaps, have resulted in counsel, assistance, and division of responsibility—a most desirable adjunction under such pressing circumstances. To every thoughtful accoucheur this important question will suggest itself: "What were the

precise causes which conspired to bring this unhappy lady 'so low' in so short a time?"—two hours. Not a word is said about hemorrhage, vomiting, or violent but ineffectual uterine pains, either one of which may be eminently successful in bringing a patient "low" very quickly; but as these causes are not mentioned in a case otherwise so particularized, it is but reasonable to suppose they did not exist. Neither would it appear that convulsions or "nervous shock" were present. Is it possible that this operation was undertaken simply to save the accoucheur's time? I believe it is a rule of the Dublin school *never* to operate without first having a consultation, except under extraordinary and pressing circumstances; this is a valuable and *safe* rule, and one which cannot be too forcibly or too frequently impressed on obstetrical pupils.

The treatment adopted when post-partum hemorrhage set in is most incomprehensible. It is not unreasonable to suppose that every accoucheur knows, or ought to know, that hemorrhage coming on a short time *after* the after-birth has been removed, is almost invariably associated with a clot in the uterus which in itself acts as an exciting cause of hemorrhage, and until it is removed hemorrhage will continue, notwithstanding the energetic use of ice, brandy, ergot, &c.

I submit that it is the first and most imperative duty of the accoucheur to pass his hand *into* the uterus in *all* cases of post-partum hemorrhage, as much as it is his duty to empty the bladder before applying the forceps. If this first and all important duty is neglected, every other form of treatment will be all but nugatory, as this most unfortunate case abundantly testifies.

The introduction of the hand into the uterus fulfils two important indications:—1st. The constantly increasing clot, and consequently the constantly increasing *cause* of hemorrhage, can be at once removed. 2nd. The presence of the hand in the uterus after the removal of the clot acts as a local stimulant, frequently inducing free and firm uterine contraction, especially if pressure be made over the fundus uteri with the other hand. In the great majority of cases of

post-partum hemorrhage this treatment, if well directed and accompanied with the free administration of brandy and ergot, will be sufficient to meet the exigency. This was just the kind of case suitable for the perchloride of iron treatment—a type of the class contemplated by Dr. Barnes when he conceived and brought forth his perchloride of iron theory.

Doubtless many of your readers will say that this miserable case, even if true, ought never to have seen daylight; perhaps so. If it had happened in the practice of a man holding inferior rank in the profession, whose opportunities of obtaining either theoretical or practical knowledge in obstetrical science had been but few, and whose sphere of labour and opportunities of doing mischief were limited to a minimum, in such a case I fully and frankly admit that silence ought to have been strictly observed. But it is a very different thing when such a case happens in the practice of an hospital physician-accoucheur, and a teacher of obstetrical science—or more strictly speaking, in that of two gentlemen holding such high rank and professional status, and whose opportunities of multiplying such cases are almost unlimited. If this case be a true one, it very clearly indicates that *some* of our teachers of obstetrical science are lamentably deficient in practical knowledge and acquirements—a shortcoming which ought to attract the attention of hospital authorities as well as fathers of students; if false, then let its author be visited with the full degree of retributive justice he so richly deserves. In either case investigation is imperatively demanded.

This letter is much too long to admit of entering into Dr. Beck's other cases at present. I may, however, be permitted to state, with respect to his vinegar treatment, that I have used vinegar and water as an injection in post-partum and other uterine hemorrhage, since 1868, often with the best results.

I am, &c.,

THOMAS CHAMBERS.

BOLTON ROW, MAYFAIR, W.
February 20th, 1874.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

APRIL, 1874.

ADMISSION OF MEDICAL WOMEN TO THE OBSTETRICAL SOCIETY OF LONDON.

To shut the door in the face of a lady has, to say the least of it, an ungracious appearance ; and when this act is performed by gentlemen, the lack of gallantry seems all the more conspicuous. It is not improbable that many of the Fellows of the Obstetrical Society of London must at their last meeting have felt their chivalrous feelings shocked when they closed their portal with such vehemence against the lady who sought to be admitted. It must also have been much more painful for them to have to do so when they found that she had been brought to their very threshold, and presented for admission by the President, Ex-Presidents, and other distinguished Fellows. We remember in our youth the feeling of humiliation with which, at the bidding of the judge, we walked out of court with the ladies when any delicate subject was about to be discussed. The ladies did not like it any better than we, but the inexorable judge would point to any lingering women or boys, and before he proceeded insist upon them all being cleared out of court. The reasons for this custom are to prevent rude shocks to modesty, and to enable counsel and witnesses to plead and give evidence unembarrassed. What applies in courts of law also holds good to a certain extent in Medical Societies. It is very truly said that science is of no sex, but still it is of paramount importance that no let or hindrance should exist to the free relation and discussion of all subjects for the consideration and advancement of which Societies have their being. At an Obstetrical Society, perhaps more than any other, matters would necessarily be openly spoken about, which rightly or wrongly are

not now conventionally discussed by gentlemen in the presence of ladies. It may without doubt be logically held correct for both sexes to converse freely together upon all medical subjects; practically, however, as society is at present constituted, such a proceeding, save in very exceptional circumstances, is quite impossible. It was this feeling, doubtless, which determined the Fellows to resist the admission of medical women to their Society, and which induced even those who signed the candidate's nomination paper to reconsider their opinions when the question was placed before them in its broadest aspect. The resolution passed so unanimously, "that the laws of this Society do not admit of the nomination of female practitioners to the Fellowship of the Society," acknowledges the possibility of there being at no far distant time more than one registered female practitioner. There are indeed indications which render it not at all improbable that women may, by a hitherto unnoticed opening, ere long find their way into the profession. Who can positively say that the diploma which the King and Queen's College of Physicians of Ireland have determined to grant to midwives, will not be a registrable medical qualification? If granted by the power of their charter, the midwives will be very little awake to their interests if they do not by every legal means endeavour to have it registered. If it be not given under the power granted the College by Act of Parliament, the qualification will have no value, and will be as devoid of authority as that now granted by the Obstetrical Society of London. The College believe that the diploma they are about to grant will not be registrable, but we regret to learn that no steps are being taken to render this point certain by referring it for counsel's opinion. Should the General Medical Council find themselves compelled to register these female midwifery members of the College, women will soon discover that by taking this licence in Ireland and a higher medical diploma abroad, they will be enabled to establish themselves in this country, and to practise every branch of the profession with all the rights and privileges of the most highly qualified amongst us. This would be a process to which the word "smuggling"

might properly be applied. If we are to have medical women, let us at least have them enter by the same portal as ourselves, and not by a side door, after an education consisting only of a six months' course upon the general principles of midwifery. If the Fellows saw in the future women of this kind seeking to join their number, it is easy to understand why they should have taken alarm, and have so jealously defended their Society from such intruders. The enrolment of a Madame Boivin could not but be honourable to any Obstetrical Society, but we cannot help thinking with the bulk of the Fellows, that the general admission of medical women to the Fellowship would be detrimental to the scientific objects and interests of the Society. Had it been decided otherwise it would have been tacitly admitted that midwifery in its higher branches was a suitable occupation for women, whereas it is confidently believed, that of all the employments for which they are mentally and physically adapted, that of dealing with the more serious Obstetrical emergencies is the one they are the least capable of undertaking. The thanks of the profession are due to the Fellows for their laudable endeavour to improve the present class of midwives, who, if properly instructed, may be safely left to deal with natural labours; but were they to encourage women generally to seek a higher Obstetrical position, they would be acting in opposition to their convictions, and assisting in providing for labouring women in serious difficulties, frail and imperfect help.

Notices and Reviews of Books.

Lacerations of the Female Perineum, and Vesico-Vaginal Fistula: their History and Treatment. By D. HAYES AGNEW, M.D. Philadelphia, 1873. Pp. 137. 8vo.

THIS little book consists of papers which have appeared in the *Pennsylvania Hospital Reports* and the *Medical and Surgical Reporter*. The Professor of Surgery in the Univer-

sity of Pennsylvania has rendered marked service to all who are interested in the surgical diseases of women, by publishing in a collected form the results of his investigations and experiences. The reader will find in Dr. Agnew's book a large amount of historical and practical matter. To the writer and the operator it will be equally acceptable and useful. His operation for laceration of the perineum is briefly as follows :— Having thoroughly cleared out the bowels, he gives two grains of opium ; the patient is placed on her back, and a thin film of tissue an inch broad is removed, the raw surfaces of which are brought together by deep metal sutures, and secured by means of compressed perforated shots : the superficial stitches of silver wire are fastened by twisting. Opium, half a grain three times a day, is given after the operation, and the urine for the first three or four days is removed by the catheter. The sutures are all removed on the seventh day, and on the eighth or tenth day the bowels are opened by oil or enema.

In operating for vesico-vaginal fistula the author places his patient, when unconscious, upon a stool covered with blankets placed across the foot or side of the bed, resting on her abdomen, two or three pillows being laid under her breast and head in such a way as to form an inclined plane. There is nothing new in his method of operating. The sutures he secures by perforated shots—an excellent plan, but rendered still more perfect by running down over the wires before the shot half an inch of coiled wire, the tube of which should be large enough to admit an ordinary pin. The urine is withdrawn by catheter after the operation, and opium given to such an extent as to keep the bowels confined. The sutures are removed on the eighth or ninth day, and the patient kept in bed for five or six days, wearing a catheter in order to take off all tension from the cicatrix, after which time she is allowed to walk about. Dr. Agnew has performed this operation “about sixty times,” with three deaths, due to hospital atmosphere, and with not more than four or five failures.

Many illustrations are introduced showing the different stages of the operations and the various instruments employed.

Essays on Diseases of Children. By W. H. DAY, M.D.
London : J. & A. Churchill, 1873. Pp. 191. 8vo.

This handy little volume, like the last, is a collection of papers previously published. We think the author has acted rightly in thus presenting them to the profession, for they contain evidences of keen observation and sound judgment, and as a contribution to pediatric medicine will be welcome to many readers. The introductory remarks on the study of children's diseases are characterized by a large amount of good practical common sense, and the points upon which the author lays particular stress are :—

“1. On the peculiar forms which disease assumes in childhood as distinguished from the forms of the same disease prevalent in adults.

“2. On the rapidity with which functional sometimes passes into organic mischief during the period of bodily and mental development, so that no ailment should be considered too trivial to receive attention.

“3. On the great importance of looking to constitutional symptoms rather than to local derangement, because the primary disturbance may be of greater moment than the effect.

“4. On the necessity of looking to diet, and adapting the quality and quantity of the food to the age and natural strength of the child.

“5. On the importance of selecting medicines, when medicine is absolutely demanded, from that class which will support the bodily powers, and assist in maintaining each function as nearly as possible at a normal standard.”

The following chapters are on the debility of children, remittent fever, obscure cerebral disease, headaches, laryngeal and tracheal irritation, and croup. These subjects, as far as the scope of the book would permit, are carefully and intelligently handled. The chapters on headaches are more especially deserving of attention. The classification of them which Dr. Day has adopted will assist the practitioner materially in employing a rational method of treatment.

The Science and Art of Nursing the Sick. By ÆNEAS
MUNRO, M.D. Glasgow, 1873. 8vo, pp. 331.

This is certainly one of the best books on nursing at present published. The author knows his subject thoroughly, and

communicates his information simply and intelligibly. He takes an exalted view of the nurse's calling, and thinks she ought to be required to pass through a regular course of instruction—to pass a written and oral examination, and receive a certificate as "skilled nurse" from a board of examiners. The present volume would be an excellent textbook for such women.

Dr. Munro divides his subject into the following chapters:—

I. The sick-room, or the place where the sick person is to have her bed.

II. The nurse, or the person who is to wait upon the sick.

III. The diet, or the food fit to nourish the sick.

IV. The mode of using the different appliances for the sick.

V. Nursing specially considered with regard to pregnancy.

Ninety pages are devoted to this last chapter, and the advice to the nurse is unexceptionable. The exact relations which a nurse should maintain between patient and doctor are carefully explained, and all her duties are indicated with sufficient minuteness. An appendix of useful invalid cookery receipts is added, which renders the work still more complete. We can confidently recommend it to all who are interested in the beneficent and responsible work of nursing the sick.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, March 4th, 1874.

E. J. TILT, M.D., *President, in the Chair.*

Special Meeting to consider the Interpretation of the Bye-laws relative to the Admission of Medical Women.

The PRESIDENT said: Gentlemen, this is a special meeting called to consider the subject respecting which you have been summoned. Many of those who, like myself, have signed the nomination paper of Mrs. Garrett-Anderson, had no wish that women should form a part

of our Society ; but they felt that the question must inevitably come before us sooner or later, and rather sooner than later, and that the question had better be settled in the ordinary way by "Yes" or "No" at one of our ordinary meetings. When Mrs. Anderson came to me and presented a paper signed by two good names, I took care to ascertain whether she was prepared for the disagreeable alternative of being blackballed ; and I took upon myself to act as a prophet, and to tell her that such would inevitably be the case. After more mature consideration, I felt that the question was one of too great importance to be decided by an exceptional case ; that it was a matter of principle, and ought to be decided upon its own merits, independently of any feeling of respect that we might have for a lady who, by English pluck and perseverance, had actually fought her way not only up to, but into, the Register. I therefore withheld the nomination paper, although it had been signed by many esteemed names, and I submitted the question to a special Council. The special Council also felt the importance of the subject, and thought it better to let the Fellows themselves consider the question, speak upon it, and decide it. That being so, the Council issued the circular which you have all received, and now you are called upon to interpret the bye-laws which were framed some thirteen or fourteen years ago. In order that you may know what you are called upon to decide, it will be as well that I read to you the paragraphs in the first and second chapters that bear on the subject you have to discuss. In the third section of the first chapter it is said, "All medical practitioners registered, or, if practising abroad, possessing a British qualification, shall be eligible for election as Fellows of the Society." Then at chap. 2, the first paragraph runs : "Candidates shall be balloted for at the meeting following that on which the certificate has been read and suspended. No gentleman shall be declared elected unless two-thirds of the votes be in his favour, fifteen Fellows at least being present." Then, again, the last paragraph of the chapter says : "If any person shall fail to comply with the regulations for the admission of Fellows within three months from the time of his election, his election shall be void." Now, gentlemen, on the one hand it may be said that if women become medical practitioners, and get on the Register, they are entitled to be elected Fellows of the Society ; and it might be urged in favour of that being done, that the word "candidate" is a word of indefinite meaning, and may refer to one or both sexes, and that the same thing may be said of the word "person." On the other hand, the word "gentleman" coming after "candidate" in the second paragraph of chap. 2, may fairly be taken as an interpretation of what our laws mean. If "candidate" means "gentleman" at paragraph 2, chap. 2, so the same meaning must attach to the other paragraphs. I hope, gentlemen, that in the numerous comments that will be made upon our bye-laws you will bear in mind that when they were framed there was no lady on the Register, and it was not supposed that ladies would get on the Register. The framers of our laws

only contemplated gentlemen candidates. This is what I ask you to bear in mind. Before opening the discussion, it is my duty to give you, as far as I can, the opinion of our esteemed country Fellows upon this important question. Many of them were anxious to be here, but they have been detained by avocations of a pressing nature that you can easily understand. I am the more desirous to let you know what their feeling is, because I do not consider myself entitled to record their opinions as votes. There might be technical objections to taking their opinions as proxies in the voting. You yourselves will, I am confident, be able to decide the question ; but it will be interesting to you to know that the circular that you have received has been answered by ten medical practitioners, eight of whom oppose the admission of women to our Society. [The PRESIDENT was about to read the names of the country practitioners from whom letters had been received, when an objection to such a course was raised by one or two Fellows. Ultimately, however, the names were read, and the President continued.] There is one point that I wish you to bear in mind. This is a numerous meeting, and the subject will interest many of you. I shall feel it my duty to limit each speaker to ten minutes ; and I must remind you that it is not customary for a speaker to speak twice on the same subject. I understand that Dr. Murray has a motion to make on the subject, and, if he will now make it, we shall be in a position to begin the discussion.

Dr. MURRAY : I have but very few words to offer to the Society. The simple question for us to settle is, whether our laws admit of the nomination of women. That is the matter at issue—whether women should be tolerated here. I must say that I am individually very much against the idea of admitting lady practitioners.

The PRESIDENT : Perhaps Dr. Murray will move his resolution first.

Dr. MURRAY : I will do so if you will allow me to make a very few remarks. Let me refer to the paragraph which you, sir, have read, in which the word "gentleman" occurs. It reads, "No gentleman shall be declared elected unless two-thirds of the votes be in *his* favour ;" and in a succeeding paragraph, chap. 5, we find, "*his* name shall be suspended in the meeting room." I think that clearly shows that there was no contemplation of the admission of any woman into our ranks. If section 3, chap. 1, ever admitted of any doubt, I think it is removed by the subsequent framing of your laws. I beg now to move—"That the laws of this Society do not admit of the nomination of female practitioners to the Fellowship of the Society."

Dr. SAVAGE : I second the motion. It seems to me that Dr. Murray has clearly shown that, according to our laws, ladies cannot be admitted. I therefore need say no more on the subject.

Dr. STEELE (Liverpool) : It seems to me that the Council have placed the Society in a somewhat difficult position. We are asked to-night to say what is the proper interpretation of our laws. I always thought that when a Society was founded, and made its own laws, so

far as the interpretation was concerned its responsibility ceased ; that it remained for the Executive, the President, and Council, to carry out those laws, and not to come back to the Society, and say, "Gentlemen, what is the interpretation of your laws?" But the question has been brought before us, and, as it is a very important question, we must deal with it fairly and thoroughly. Now, although I entirely agree with Dr. Murray as to the admission of women, I cannot agree with his interpretation of the law. It appears to me to be perfectly beyond controversy that if your statutes say that every medical practitioner shall be eligible as a Fellow of the Society, and if Mrs. Garrett-Anderson is a medical practitioner, she is clearly eligible for admission here. As to the gender and the pronouns that follow, is it to be supposed that such a matter as that can overrule the principle that you will admit for nomination every qualified practitioner? But the fact of nomination is one thing, and the fact of admission is another. If Mrs. Garrett-Anderson, or Mrs. Anybody-else, be nominated, she will have to run the gauntlet of the ballot, and she will not be elected a Fellow of the Society unless she have the required majority of votes. We cannot altogether evade the general principle. That is my view. To me the law is perfectly clear, and I submit that you cannot refuse to receive the nomination of any qualified practitioner. With regard to the policy of admitting ladies as members of this Society, that, of course, is a different question. On that point I have endeavoured to make myself acquainted, as far as I could, with the feeling of my professional brethren in the provinces, and it seems to me to amount to this—that it would be undesirable that ladies should become members of the medical profession in any numbers. We think it extremely unlikely that that will ever be the case ; and we think that the best mode of discouraging it will be not to offer any opposition to individual cases ; but if any lady, properly qualified, come here properly nominated, let her run the gauntlet of the ballot. Individually, I should be very much disposed to vote for the admission of a lady, especially of Mrs. Garrett-Anderson, because we know that she has exceptional qualifications for carrying on the profession. When we meet with a Joan of Arc, or a maid of Saragossa, or a Grace Darling, we recognise their courage and their ability ; but in doing that, we do not say that we wish to throw open the army and navy to women. So when an extraordinary case comes before us, an exceptional case which proves the rule that the female sex are not adapted for the profession, I do not know whether we should not be adopting a wise policy in admitting the candidate to our Society. I am afraid that the Society will subject itself to some severe criticisms if we decide that we cannot allow a female to be nominated as a member, when our laws tell us that every qualified practitioner is eligible.

The PRESIDENT : Allow me to remind you that the very nomination concedes the principle. That is why I withheld the paper, because, on studying the bye-laws, I had doubts whether we had a right to

nominate. If the meeting decide that the bye-laws mean women as well as men, then only will it be right to nominate, then only will Mrs. Anderson's nomination be worth anything more than the paper on which it is written. I hope it will be borne in mind that the nomination concedes the principle. You are asked by Dr. Steele whether the bye-laws justify that.

Dr. CLEVELAND : The question is simply as to the interpretation of bye-laws. It seems to me as clear as possible that when the bye-law was formed, it was never contemplated to admit women into the Society. If such had been the intention, it would have been expressed very differently. We must now, after the lapse of fourteen years, take the spirit as well as the letter of the bye-laws ; and taking the spirit of it, it seems to me as clear as possible that it was never contemplated to admit women. The whole question of nomination hangs upon this. It is surprising to see how the bye-law can be interpreted in any other way than that which I have mentioned.

Dr. WYNN WILLIAMS : I go further than that, and I say that the framers of the law could not have intended that women should be admitted, for there were no women on the Register, neither were there any means by which they could get on the Register. Mrs. Anderson has managed—I admire her spirit—to get on the Register ; but no other woman can be placed on the Register until the medical laws are altered. It is necessary that they should attend lectures in the usual way. Mrs. Anderson did not attend lectures ; but somehow or other she was smuggled through Apothecaries' Hall. That cannot happen again ; and until the laws of medical education are altered, women cannot be put upon the Register. There is but one woman on now, and she was not on then.

Dr. GRAILY HEWITT : As one of the original secretaries of this Society who assisted in the construction of these laws in the first instance, it may perhaps be as well that I should say a few words upon the subject. It is certainly a fact that those who framed the laws of the Society never for an instant anticipated the admission of women into the Society. I do not think that the matter was even the subject of deliberation, or that it was even mentioned on any one occasion in the deliberations which took place in respect to the formation of the laws. I agree with what Dr. Cleveland has said, that we must look not simply to the wording, but to the spirit of the laws. I say nothing as to the personal merits of the lady who has been the means of originating this discussion ; but I do say that when the Obstetrical Society was formed, I do not think it was ever intended to admit ladies into the Society.

Dr. SQUIRE : I understood that we were invited to consider not what the law literally meant, but what was the intention of the founders of the Society in drawing up this law. I am glad to hear from the gentleman who was secretary at that time, such an authoritative statement of what the intention was when the laws were formed.

"Medical practitioner," we know, can be masculine or feminine. "Probationer" certainly is meant for males only; it is used in reference to monastic orders, and "novitiate" or "novice" is used for the other sex. If we are to have female medical practitioners, some other word had better be invented by the time that state of things arrives. I maintain that the word "medical practitioner," by a forced departure from its usual meaning, does not, even in its literal sense, mean that women are to be admitted as members of this Society.

Dr. H. SMITH: There are two points before us—the letter and the spirit of the law. With regard to the letter, we have to consider whether the regulation allows simple nomination. With regard to the spirit, the question is as to the admission of women altogether. Now, though I am not in favour of the admission of women to the Society, there seems not to be the least reason why there should not be a nomination. It is all very well to say that the founders did not contemplate the admission of women. The thing was not contemplated by the profession generally. The word "candidate" or "practitioner" would admit both sexes; and I do not think that the use of the word "gentleman" or "person" or "his," will in the least militate against that. We know how the word is used in all documents. Even in one's early grammar, we find that the male gender is more worthy than the feminine, and the feminine than the neuter. For the sake of convenience, one pronoun is used; and in all documents the masculine word would be used in reference to what has gone before. Therefore it seems to me that there is not the least reason why a nomination should not be allowed. With regard to the principle, it is true there is only one person yet able to be admitted; but we know not what steps may be taken within a year or two. Therefore I think we ought to embrace the present opportunity to discuss the whole matter. As to the admission of women, the difficulty would be this. It is quite a different thing from the women meeting by themselves in an Obstetrical Society of their own. In a meeting like this, we can imagine subjects being brought forward for discussion when, though the women might not feel the objection, many of the members would not like to be present. As to the interpretation of the law, I do not see any reason why, simply because the male pronoun is used, Mrs. Garrett-Anderson should not be nominated. At the same time, I think the spirit of the Society is against the admission of women.

Dr. GODSON: The last speaker has said that the male is more worthy than the female, and the female than the neuter. I should like to know whether he refers to the English, Latin, or French Grammar. I remember it in my Latin Grammar, but not in my English.

Mr. J. SCOTT: I think, in all legal documents, where it is intended to specify both sexes, the words "he or she," or "him or her," are invariably used, so that no mistake can possibly arise. Looking at our rules, they could not have anticipated a state of things which did not exist. At that time there were no female doctors to legislate for.

The rules could not be applied by any strained interpretation to a state of things which did not then exist. Such a thing was never then contemplated.

Dr. AVELING : I think, if the Fellows desire that women should enter our Society, the bye-laws may be interpreted so as to allow it. The British Medical Association framed laws long before we did, and they found no difficulty in interpreting their laws so as to admit Mrs. Garrett-Anderson as one of their members, on the nomination of some of the best members of our profession. I am not standing up to plead the cause of women as obstetricians, because I think that, if there be one occupation for which they are less fitted than another it is that of attending the emergencies of obstetric practice. At the same time, having a personal knowledge of Mrs. Garrett-Anderson, I was induced to sign her nomination paper, knowing that she is the only medical woman in England, and that it is probable she will remain so, and knowing also that she would not obtrude herself upon the Society when papers were likely to be read, during the reading of which her absence would, perhaps, be an advantage. Under these feelings, I was led to sign her nomination paper. My friend Dr. Murray takes a broader view of the question, and, in a very determined manner, puts it upon the admission of women into the Society. I think that question might be put off a short time, and, until medical women actually exist, we might have dealt with the one. As the broad principle is raised, I shall certainly vote against women being admitted to the Society; but if it had been simply the question of the admission of Mrs. Garrett-Anderson, I should have voted in its favour.

Dr. ROUTH : As I read the circular put into our hands, the true question to be submitted to the special meeting is, What shall be "the proper interpretation of the actual bye-laws and regulations?" But, it is added, "or so to alter the bye-laws and regulations as to express clearly the intention of the Society as to the admission of women." I presume, if anybody in this room be disposed to move that these bye-laws should be so far modified as to admit women, he could do so.

The PRESIDENT : Yes, of course.

Dr. ROUTH : According to the statement put forward by Dr. Murray, it would imply that we are come here merely to put an interpretation upon the laws.

The PRESIDENT : No, it does not. If I correctly understood Dr. Murray, he did not mean that at all. He proposed a motion to the effect that our bye-laws do not admit the nomination of female practitioners. It is open for you, or any other gentleman, to propose that they do, and then the sense of the meeting will be taken. If anybody likes to move an amendment that women are admissible, let it be done.

Dr. ROUTH : I understood that resolution as a definite statement that our laws mean a certain thing. If it were merely a question on

that point, I should be disposed to doubt it, and to put it to any members of the Society. Supposing any one were to make a will, and in that will were to use the term "to his heirs, executors, administrators," &c., and there happened to be no males, would it not go to the females? Indubitably it would. Therefore, I think Dr. Heywood Smith is quite right as to the meaning of the word "his," that it indubitably includes the female. I, for one, have not that fear which seems to have pervaded a part or the whole of the profession, that women, if they are admitted, will supersede us. There seems to be a fear of women being brought in. Is it so, or is it not? [No, no.] I noticed that Dr. Aveling thought women were quite incompetent, from their physical position, to perform difficult obstetric operations; and I see, when I look over to France, that, out of the large array of women who can be there brought forward, there are just two who are able to compete with men. As far as position goes, I must confess I have not the slightest fear on the point. I do not think the women of England themselves—that is my experience of them—will go to female practitioners when they can get male practitioners; and therefore, as far as that question is concerned, I really have not the slightest fear whatsoever as to the position which they may take. They will altogether occupy a secondary position. I do not know whether it is wise to bring forward this resolution, to the effect that women be admitted. I for one would not do it, simply because I know the feeling of the members of the profession to be against it. I signed that paper of Mrs. Garrett-Anderson's because I believe she is a talented woman, and is perfectly as conversant as many of us with the branches of her profession. Although I could not refuse to sign the paper, I was perfectly certain that, if her name were proposed in the Society, she would be blackballed, and, therefore, I should be very sorry to make any modification in this law. The only point I wished to raise was this. It appeared to me that we were in error in giving too exact and definite an interpretation to these bye-laws, because circumstances might alter at some future time. Remember, we ourselves stand up for the education of women. We want to make a class of educated women, whom, perhaps, at a subsequent time, we might be willing to admit as Associates.

Dr. GALTON: There is but one way to bring this matter fairly and decisively to an issue, and that is by some member of this Society proposing that the bye-laws be so altered as to admit women. I myself will propose that the bye-laws be so altered as to permit the admission of women into this Society, and I do so on this ground. I think we have hitherto been discussing the letter, and not the spirit of this Society. We have been discussing the interpretation of bye-laws, and not really the very *raison d'être* of the Society, which is the advancement of the art of obstetric medicine. If that art of obstetric medicine can be shown to be possibly advanced by the admission of women within these walls, it surely is our duty, acting in the interests

of this Society, not to exclude them by any decisive vote on this occasion. That it may so benefit the Society, and further the immediate end of this Society, I think has already been shown by the existence of the French ladies whom Dr. Routh has instanced. That it might not have done so when these bye-laws were framed, is true, because no women were then registered medical practitioners. Why do we confine the admission of Fellows to the list of registered medical practitioners? It is because, as I imagine, we want some guarantee that the observations which are brought before this Society by these Fellows shall have been founded on some experience, and some education specially in disease. One lady has already become a registered medical practitioner, and the question hinges upon her admission. I think that this question is really a very great one, and it is one which we ought not to decide hastily. The progress already made, for some years, in these matters, has been steady and uniform. I do not mean with reference to the admission of women into the profession. I hold the opinion that women are quite unfit for the profession; but, having women already in the profession, and the probability being that we shall have more, should we not be excluding one great means of advancement of the obstetric art by the exclusion of those who have the opportunity, the ability, and the power to make observations which might redound to the credit of our Society? If we, for instance, had an English Madame Boivin, how could we possibly exclude her from this Society? Would it not be a loss and a reproach to the Society to exclude such a woman? By voting in favour of this amendment we do not express any opinion upon the desirability of women engaging, as a general rule, in the practice of the obstetric art. We are dealing with those who are already medical practitioners; they must be in a position, not only to make observations, but, being in practice, they will have the power, possibly, of bringing before the Society some cases of interest which may occur to them, and not to other members of the Society, and we shall be shutting out from ourselves a source of great benefit and advantage to the Society. I therefore propose, "That the bye-laws of the Society do admit of the nomination of female practitioners to the Fellowship of the Society."

Dr. KISCH: I beg to second the amendment before the meeting. I am aware that this amendment must be lost in the present temper of the Society by a very large majority; but I am sure, when the members come to consider the matter some years hence, when the existence of female practitioners will have been confirmed, it will be considered a discredit that the Society should have admitted that subjects are discussed here in such a manner as that they could not be discussed before other persons. [Question.] As to the spirit of the bye-laws, it is clear that, as the existence of female practitioners was not contemplated when the Society was founded, it is merely a verbal quibble, and nothing more, to say that, because the word "his" occurs, the spirit of the Society is against the admis-

sion of women. It is quite clear the thing was never brought before the Society at all.

Dr. H. SMITH : I wish to explain, with reference to the immense majority expected to overwhelm this amendment, that the question of the advisability of admitting women as Fellows is not, in the least, before the Society ; it is simply as to the interpretations of the bye-laws, whether it is possible that the bye laws could be so interpreted as to admit them.

Dr. CHARLES TAYLOR : As one of the original members of the Society, many years since, I think it is a very fortunate circumstance that Dr. Galton has given us an opportunity of having an amendment put to the motion. From what he has said, I gather that, when it is put to the vote, he will vote against his own amendment, as he speaks strongly against the admission of lady-practitioners as Fellows of this Society. It appears to me, that those who have spoken are pretty well unanimous in their opinion with regard to this, and I think the original members certainly are also unanimous. When the Society was established, we did not anticipate the pleasure of having ladies coming amongst us, or the unpleasantness of their presence. I think we all agree to that, and the gentleman is a very bold man who comes forward with the opinions that he has enunciated, almost saying that he decidedly is of a contrary opinion. I think it is a great thing for this Society that this matter should be brought forward, and finally settled. We, I believe, are almost unanimously of opinion that our bye-laws do not admit, and were never intended to admit, lady-Fellows of this Society. Let it be once settled, and we shall never have them again offering themselves as Fellows, or even being nominated by those gentlemen who are so polite as to have the ladies' cause at heart. I think there is very little doubt of that. This amendment is sure to be lost, and the original motion is sure to be carried. Then, it appears to me, if there should be any further doubt about it, the best thing will be so to frame the laws, or alter them, as to show that the admission of ladies is quite out of the question. I have mentioned the matter to several friends, Fellows of this Society, and to other medical men, and the universal opinion is, that the Society would be very greatly damaged if we admitted lady-Fellows. I believe a large number of men, pleased as they are to meet the ladies upon other occasions, would be anything but pleased to meet them here, and that they would decidedly withdraw from the Society.

Dr. WILTSHIRE : Dr. Taylor has hit the pith of the matter. We are not to consider Mrs. Garrett-Anderson's interests, excellent and clever woman though she may be, but the interests of this Society ; and I may venture to say, in the interests of this Society, that her election would be ruinous. I do not hesitate to say, from what I have heard from many Fellows, that there would be a very large secession of members. That would be very damaging to obstetrics ; and, as we neither want to damage obstetrics nor this Society, I

think the best thing we can do will be so to amend our laws, if they require amendment, or so to interpret them, that the possibility of ladies being nominated as Fellows of this Society shall not occur again. The introduction of one lady—and it is said that there is only one—might be a questionable benefit to herself, but it would be an unquestionable damage to the Society; and if we are interested in the Society, and in obstetrics, the best thing we can do is to exclude women altogether.

The amendment was put and lost, only four hands being held up in support of it.

The original motion was then carried, with but one dissident.

The PRESIDENT: You understand how the question has been decided, and I congratulate you upon the business having been so quietly and so admirably disposed of.

THE EDINBURGH OBSTETRICAL SOCIETY.

Meeting, 14th January, 1874.

Dr. J. MATTHEWS DUNCAN, *President, in the Chair.*

Dr. JAMES YOUNG showed a mole, which, before removal, had occasioned a good deal of hemorrhage.

Dr. J. MATTHEWS DUNCAN exhibited and explained Hecker's new sling for difficult breech cases, with improvements by Poppel and Gregory. Dr. Duncan said that a great variety of means had been suggested and devised for such cases—that was, where the hand was found to be quite inadequate. He himself had succeeded with the hand, but others had had occasion to resort to instrumental means, such as the blunt hook or the forceps. Hecker preferred a different plan, and had reintroduced (for his apparatus was a reintroduction) the sling. This was made of silk, and it was pushed up and over the anterior thigh by an instrument resembling Belloc's one for plugging the nostrils. The beauty and ingenuity of the instrument lay in the fact that it readily locked and unlocked, and might be used also as a blunt hook. Gregory had added the bit of bone at the extremity of the sling, which rendered it more easy of passage than when the silk was rolled up simply. Dr. Duncan warmly commended the instrument.

Dr. CAIRNS could not see any advantage in the sling over the hand. Those tapes were deficient in elasticity, a quality of the highest importance. The article was not new; and, in fact, something better had been introduced to the notice of the Society about four years ago. This was a piece of clock-spring covered with gutta-percha, and, when introduced, it turned round naturally, and enabled one to catch the end. He believed, however, that the hand was usually sufficient, especially if it were a small one; and he referred to a very difficult

case which occurred in his own practice lately, where Dr. Milne succeeded thoroughly with the hand alone.

Dr. THOMSON thought that Hecker's instrument was an ingenious one, and might prove of considerable service in the more difficult cases—viz., those where the hand failed.

Dr. CHARLES BELL could perceive no superiority in Hecker's instrument over the blunt hook. There was a risk, he thought, that when endeavouring to pass it over the thigh, it might go too far, and impinge on the other leg. It ought to be so adapted in its curve as to embrace either one thigh or both. He was of opinion, also, that there would be some difficulty in getting the ligature introduced. Dr. Cairns had eulogized a small hand, but he begged to cite the opinion of an eminent London obstetrician—the late Dr. Ferguson—that, in midwifery, a big hand was frequently of more utility, because it possessed more power.

Dr. M'RAE had hitherto managed all his breech cases without any kind of apparatus; but he could conceive of circumstances rendering such an instrument as that of Hecker's of no little value.

Dr. JAMIESON had recently met with two very difficult breech cases, where, he had no doubt, the instrument shown would have helped him greatly. In one of these he applied the forceps; in the other he introduced a handkerchief over the leg, and thus succeeded in effecting delivery.

Dr. MILNE had dealt with many breech cases in his own practice and that of others, but had always succeeded with the hand.

Dr. DUNCAN replied that there had been a misunderstanding in reference to his statement of the function of Hecker's instrument. As he said himself, he had always succeeded with the hand; but rare cases would cast up, where, owing to great obstruction at the brim, the hand would be found quite inadequate; and hence the value of such an instrument as that which he had exhibited to the Society.

New Form of Galvanic Pessary.

By Dr. JAMES YOUNG.

Some years ago I introduced to the notice of this Society a new form of intra-uterine pessary, the only difference being the formation of the bulb.* Sir James Simpson on that occasion allowed that he had had frequently great difficulty in introducing the usual intra-uterine pessary, in consequence of the size of the bulbous head. Made as I ventured to recommend, the difficulty is entirely removed. A serious disadvantage, however, has always been present to my mind—namely, the retention of the intra-uterine pessary *in situ* only with the aid of a shelf gutta-percha support. To all who have been in the habit of using this valuable instrument, the difficulty referred to must have proved annoying. I now introduce to your notice a

* *Edinburgh Obstetrical Transactions*, vol. ii. p. 47.

form of pessary, A, made by Gardner, cutler, South Bridge, in which, you will observe, the stalk is divided into two halves; one blade is soldered hard on the bulb, while the other half (or second blade) is



worked on an internal plate, which, by the rotation of the milled button at the end of the stem handle, is easily opened up, presenting somewhat the appearance of the letter V. In place of *one* aperture in the bulb of the pessary, there are *three* in this instrument. The central square aperture is for the central rotating pin of the handle, and the two side openings on the outer bulb are for grasping the whole pessary, which is introduced through the cervix uteri, and by the rotation of the button the pessary is opened up, as shown in the woodcut, B. From the formation of this pessary when open, it will

be seen that it naturally retains its position, the two blades being apart; and when it is to be removed, the slightest traction by the fingers will withdraw it, or, if necessary, you can introduce the stem, turn the screw, and so close the blades; but that will seldom be required, especially as the blades possess a degree of adduction as well as resiliency. The instrument for the introduction of the galvanic and stalk pessaries, consists of a steel tube with a central rod, square at one end to fit the central aperture of the pessary, and two wing pins to grasp the outer bulb, which retains the pessary in position, and allows the rotation of the inner plate, so opening the stem of the pessary. The rotation is effected by a milled button at the outer end of the handle, the instrument being held firm by a large scissor ring for the forefinger of the left hand.

Dr. JAMIESON inquired if Dr. Young was sure that such an instrument as he had exhibited had not been previously described in a medical journal as the invention of another. Dr. YOUNG replied, that so far as he was aware, his instrument was quite an original invention.

Dr. DICKSON thought the instrument ingenious, but questioned if there would be any galvanic action on the uterus. He suggested the addition of a bit of ivory betwixt the two metals, in order to insure this desirable end.

Dr. CHARLES BELL considered that the Society was much indebted to Dr. Young for bringing this ingenious instrument before it. He doubted, however, if it could be easily introduced in the very young female, and he suspected that, by the excitement it would induce, an increase of secretion from the cervix and a dilatation of the os would occur, rendering it difficult to retain it in the uterus. In his opinion, the question before the Society was, the consideration of a new instrument, and not the propriety of using it, which would entirely depend on circumstances.

During this discussion, several Fellows expressed themselves

strongly against interference with the virgin uterus, unless under the pressure of imperious necessity.

New Method of Tying the Umbilical Cord with a view to prevent possible Hemorrhage, with preparations.

Dr. DICKSON said: Having had three or four cases of bleeding from the umbilical cord, notwithstanding the application of the usual two ligatures, and as the medical attendant may be blamed quite undeservedly in such cases, I some time ago devised a plan which promises to prevent any such annoyance in future. A thick gelatinous cord is that which is most liable to bleed. Although tied very tightly by the "clove hitch" or otherwise, it shrinks away from the ligature; and the moment its diameter becomes less than that of the ligature, the vessels become pervious, and bleeding may ensue. I say *may*, because in the great majority of such cases it does not. With a view to prevent it in all instances, I began in September last to use what is called "flat silk elastic," which is a ribbon about a sixth of an inch broad, made of about eight threads of india-rubber, interwoven with silk. One yard of it will tie about a dozen ligatures, one being sufficient in each case. As it is very strong, it can be tied tightly on the cord, which it follows as it shrinks, so that no hemorrhage can possibly happen. In the specimens shown, the difference between the two kinds is well seen—the one being quite slack, while the other still maintains its grip.

Dr. BRUCE said he had rarely, if ever, been troubled with bleeding from the cord, and he was in the habit of using three ply of common thread.

Dr. BELL agreed with Dr. Bruce, that three or four ply of grey thread formed a perfectly secure ligature. He was afraid that the elastic band, proposed by Dr. Dickson, would yield after a little heat and moisture.

Dr. BURN preferred a few plies of thread, moistened and twisted; and he was always in the habit of applying two ligatures.

Dr. CARMICHAEL acknowledged that Dr. Dickson's method was ingenious, but he had always got on well with thread or twisted tape. These latter, too, were always at hand.

Dr. PRIDIE used twisted tape or thread, and found them quite effectual.

Dr. FRASER had every confidence in twisted tape, and he preferred it to thread, as this latter might cut through a very gelatinous cord, unless care were exercised. He suspected that heat and moisture would destroy the elasticity of the flat india-rubber silk of Dr. Dickson, and prevent it following the shrinking cord.

Dr. CAIRNS regretted that he could not recommend Dr. Dickson's invention. An elastic band, unless put at full stretch, will certainly recoil; and if so, the vessels of the funis will, of course, be left open. There was most trouble from the internal or constitutional hemorrhage, and frequently the cautery and other devices had to be em-

ployed. Dr. Cairns had invented an instrument which, he believed, would supplant the ligature—viz., an article acting on a swivel, which crushed or rather chewed the vessels, and thus resembled the method of the lower animals.

Dr. DUNCAN thought Dr. Dickson's plan both ingenious and efficient. Dr. Dickson had exhibited specimens which demonstrated that this elastic band constricted the cord, and bound the vessels more thoroughly than by means of the usual ligatures.

Meeting, 28th January.

Dr. J. MATTHEWS DUNCAN, *President, in the Chair.*

On a Case of Spurious Pregnancy with Labour.

By Dr. UNDERHILL.

Early in October of last year Mrs. M., aged twenty-three, came to ask me to attend her in confinement. She had been to consult her medical man, not an accoucheur, who sent her to me, after hearing an account of her symptoms, and telling her she was pregnant. Her history was as follows:—

Previous to marriage her menses were always regular, painless, and lasted about four days. She was married in January last, menstruated in February as usual, and since then has seen a very small quantity of discharge every month or six weeks, seldom lasting more than a day, or being more than enough to stain one cloth. The discharges were not quite regular, and were sometimes accompanied by pain. In March, April, May, and June she was sick, and vomited every morning, the sickness passing off about midday. From this time her belly began to swell, so that she several times found it necessary to let out her dresses. She has been feeling the movements of the child for several months, but does not know when she first felt them. Her breasts have also enlarged, but not very much.

I only saw her for a few minutes, and as she had a large waterproof cloak on, I was unable to see anything of her figure, but agreed to attend upon her, with the intention of inquiring into her monthly menstruation when her labour came on.

On Thursday, 13th November, I was sent for in the morning, and found her sitting up. She said she had had pains off and on since the Monday, and had had a considerable "show." She also stated that the pains were coming on now about every ten minutes, had been bad all night, but were better in the morning.

I was sent for again about 2 P.M., and found her lying on the bed undressed, and as I entered the room she was apparently in the middle of a violent expulsive pain. She was crying out lustily, and biting a handkerchief between her teeth to prevent her cries being heard, while at the same time she was pulling hard at a cloth attached to the bedpost by way of helping the pains. I was told that pains of

similar severity were coming on every five minutes or oftener. She complained mostly of pain round the back and loins, and some little in her belly. I saw another pain very similar to the first I had seen, and then tried to make a vaginal examination, fully expecting to find labour well advanced. I found great difficulty in introducing my finger, owing to a most determined contraction of the thighs together, and as soon as I touched the vulva, she threw herself round on her back, struggling and shrieking loudly. She declared that the mere touching of the vulva gave her great pain in the back. The *sphincter vaginae* was in a condition of spasmodic contraction; but, by determined persistence, I at length managed to reach the os, and, to my surprise, found it quite virginal, small, round, and hard; the pelvic brim was not occupied by any swelling or hardness, but all the parts felt quite natural. In fact, neither pregnancy nor any condition of disease could be made out by the finger. On examining the abdomen, it was found to be moderately distended in its lower part, but not nearly large enough for a full-time pregnancy; it was resonant to percussion all over, but the tapping caused her to wince and cry out as if in pain. I then made gentle pressure towards the pelvic cavity, and while engaging the patient in conversation, pushed in my hand, so that I could feel the promontory of the sacrum, and satisfied myself that the cavity of the pelvis contained no tumour large enough to be felt from the outside. On examining the breasts, I found them full, but not hard, with a light-brown areola, but the nipples were small, and not puffy, or in any way resembling the nipple of pregnancy. I told her at once that she was not pregnant, and that the whole thing was a mistake; and afterwards, though she complained of soreness and pain round the back, she had no more of the imitative throes of labour.

Thinking that there might be some vaginismus from the difficulty I had found in examining her, I asked her, and she stated that connexion gave her great pain occasionally, but not always; and from her husband I learned that connexion was perfect, and, as far as he knew, without any pain to her, and that at least she complained of none.

The next day she was sitting up: the discharge still went on, but beyond a little soreness in the back, she was quite well. A dose of laudanum had given her a quiet night. Such are the facts of this case.

I need not remind the Society of the many cases of spurious pregnancy on record, though spurious labour appears more rare. The peculiarity of this case seems to be, that the patient is a young woman of very good sense, and not at all of an hysterical character; that she was induced to believe in the existence of pregnancy by the opinion of her medical man, somewhat against her own judgment. She had some doubts about the pregnancy all the way through; that this notion had fixed itself in her mind; and that when a more than usually powerful stimulus to the sexual organs

had arisen in the form of a delayed and, for her, unusually copious menstrual discharge, this notion had exploded in the pains of a simulated labour. The imitation of the labour pains was very striking, the more so, as I found subsequently that the patient had never seen a woman in labour. In the words of Hamilton, as quoted by Montgomery, "She acquired the most accurate description of the breeding symptoms, and with wonderful facility imagined that she felt every one of them."

I may mention that this occurred in a common stair where there were five or six other young women, who had been married about the same time as my patient, and who all had either been confined or were expecting to be so directly; in fact, there was in that stair a kind of epidemic of babies, and my patient had caught the complaint.

In this, as in most cases of spurious pregnancy, there were many of the usual symptoms of pregnancy, but some startling exceptions—among the latter may be noticed the continuance of the menstrual discharge, though rather irregularly, and in small amount. The abdomen, too, was not much distended—a fact I did not discover until the so-called labour, as I had no opportunity of making an examination previously. Like many similar cases, there was apparently no uterine or ovarian disease.

I saw the patient last week, and she was in perfect health. One lesson, at all events, this case has taught me, and that is, that when a woman thinks she is pregnant, and yet continues to have a tolerably regular discharge every month, however small the amount be, and however different from her usual habit, the existence of pregnancy must be looked upon as extremely doubtful, and the other symptoms must be carefully inquired into.

Dr. MACDONALD said that Dr. Underhill's case was a peculiar one. He could not say that he had met with what might be called a genuine case, although he had encountered many women who fancied they were pregnant, and were not. Such cases were not unfrequent; he might add, they were interesting and even inexplicable. It was impossible to explain the relation between mind and matter here—in other words, the mental processes leading to all the physical phenomena of labour.

Dr. GORDON said there must be something more than fancy in such cases, for the lower animals were liable to the delusions of pregnancy and labour—that was, of being pregnant and parturient when they were in reality not.

Dr. JAMES YOUNG said he had been engaged to attend a lady where menstruation had ceased for nine months; the belly was distended to the full size. Fetal movements were felt, according to the patient's views. The nurse and baby-linen were all procured. Dr. Young was sent for hurriedly to the delivery; but, on examination, the whole distended belly collapsed in a moment, air being the only product.

Dr. DUNCAN had seen many cases of spurious pregnancy, but only one of spurious labour. This was a lady who had borne five children previously. The menses had stopped, or rather, there was a scanty discharge, and at the wrong time. The abdomen was greatly distended. He received a pressing message to go to the lady, but being out of the way, a second most pressing one came. His diagnosis was, on examination, that the whole thing was a mistake—there was no pregnancy. The lady was quite incredulous. She was no novice, having borne five children previously; she knew the symptoms well. Still, as before said, there was no genuine pregnancy—no living product. This lady, Dr. Duncan added, kept up the delusion well, and made her friends believe that she had really given birth to a child, but that it was still-born. Dr. Underhill might have entered more profoundly into the interesting subject—and it was really interesting. There were various degrees of it. For example, there were some who merely exhibited the symptoms of pregnancy, and these symptoms never culminated in spurious labour. Were it not for the undoubted fact that some of the lower animals, such as bitches, exhibited spurious parturition, he would be inclined to deny it altogether. As it was, the thing could not be challenged—it was no mistake or delusion—at least, barring a few cases; but a reality, and, in fact, a disease. Dr. Duncan desired to emphasize that a distinction should be made betwixt those cases where there was merely spurious pregnancy—that was to say, where women fancied themselves pregnant—and those where this fancied pregnancy culminated in a fancied or spurious labour. Authors had not sufficiently attended to this distinction.

Dr. CARMICHAEL inquired whether such cases were more prone to occur at or near the period of the final cessation of the menses. He had found it to be so.

Dr. DUNCAN said that the disorder was specially apt to occur at that time.

Dr. WILSON said he had not seen many cases of spurious pregnancy; that was to say, where there was also fancied or false parturition. Of course, he had often met with females who thought they were pregnant when in reality they were not. He believed that sheep were liable to the delusion, and, in fact, discharged something, as was stated by Harvey.

On the Relation of the Vomiting of Pregnancy and the Quantity of the Liquor Amnii.

By Mr. DONOVAN. Communicated by Dr. RITCHIE.

In bringing the following case before the Society, I am actuated by a desire of obtaining the opinion of the Fellows, and thereby increasing my own knowledge of the subject.

Some months ago I was consulted by a lady who was about six months pregnant, and who, almost from the date of conception, had suffered so severely from sickness of the stomach, that her life was

a burden to her. She had not been able to retain food of any sort for more than half an hour—in fact, it was no sooner down than it was up again. I ordered her a mixture containing bismuth and hydrocyanic acid, which, when taken before eating, enabled her to retain her food for about two hours. This state of things continued up to the time of her confinement, in which I attended her. When I saw her she was twelve hours in labour. On making an examination, I found the os very slightly dilated, the head presenting, but no trace of the usual bag of liquor amnii. On asking the nurse when the waters had come away, she told me there had been no discharge at all. Certainly there was no sign of water or other loss on the bedclothes. The os uteri showing a tendency to rigidity, I recommended the patient to inhale a small quantity of chloroform, which she refused. She, however, took some warm beef-tea, which she threw up, and in a short time the os relaxed. The first stage of labour had continued eighteen hours. In two hours from the time the os uteri commenced to relax, the patient was delivered of a healthy, fully-developed child, without the loss of more than an ounce of fluid, which appeared more like mucilage than liquor amnii.

The inference I have drawn from this case is, that the distressing symptoms during pregnancy were caused by the almost total absence of liquor amnii allowing the fetus to come in direct contact (during movement) with hypogastric and other ganglia of the sympathetic nerve situated in the neighbourhood of the uterus.

Dr. WILSON said he had seen numerous cases, but would not pretend to advance any theory as regarded causation. He found those cases occurring at the earlier months ameliorated by simple means, such as taking a light breakfast in bed.

Dr. MACDONALD said that Mr. Donovan's theory was a reproduction of one frequently heard, say in the Cowgate—viz., that the hair of the child rubbed against the stomach of the mother, and thus excited vomiting.

Dr. GORDON said he had never observed the slightest connexion between the amount of liquor amnii and the sickness of pregnancy.

Dr. DUNCAN said that it was extremely desirable to have some light thrown on the subject of the causation of sickness and vomiting during pregnancy, for it was a serious and painful, and even fatal, disorder in some cases. We had certainly means to soothe it, but treatment was quite unsatisfactory. Referring to Mr. Donovan's theory, he remarked that it was not the right one, and this for divers reasons. Firstly, where there is no liquor amnii there can be no (intra-uterine) fetal movement: the thing is impossible. No child, not even an adult, could move if tied up, so to speak, tightly in a bag or sack. If Mr. Donovan is right, then the sickness should be greatest at or about the seventh month, when, as a rule, the child has most facility of movement; but this is found not to be the case. Secondly, in the great majority of cases, the sickness was greatest

during the first half of pregnancy, and at this earlier period the movements of the fetus were weakest. Thirdly, in cases where the liquor amnii had been discharged even for six or eight weeks, such as the one he had related to the Obstetrical Society of London, it had been found that there was no supervention of sickness. Dr. Duncan added that he had seen cases of sickness to a morbid extent from time to time. He had seen one case turn out fatal in the earlier months, and where the pregnancy was not marked by anything else unusual. Finally, Dr. Duncan said there was still much mystery attaching to the pathology of the disorder.

Dr. GORDON had also seen many cases, and agreed with Dr. Wilson as to the benefit of a simple breakfast in bed. He thought the causation still unknown.

Dr. UNDERHILL inquired if the disorder ever happened to the lower animals, but none of the Fellows present had met with such cases.

Dr. FURLEY thought that the pressure of the fetus might have something to do with the vomiting; for this was common during labour, especially when the presenting part pressed on the os.

Dr. MILNE, though not as yet prepared with a theory, had somewhat modified his views as regarded causation. He was disposed to think that at least the more obstinate cases might be explained by some direct or indirect influence on the central-nerve masses; in others, renal irritation might account for the disorder.

THE DUBLIN OBSTETRICAL SOCIETY.

Meeting, February 14th, 1874.

EVORY KENNEDY M.D., *President, in the Chair.*

Fibrous Tumour of the Uterus.

DR. KIDD exhibited a specimen which he had removed from the interior of the uterus of a lady on the previous morning. So many of these tumours had been exhibited that he almost hesitated to bring the case before the Society. The tumour grew from the fundus of the uterus, and had passed through the os internum and lay in the canal of the cervix. The cervix was expanded over the tumour, and the os was so large that he could, with the tip of his finger, feel the tumour through it. The patient was an unmarried lady, forty-two years of age. She had been suffering a great deal of pain for the last two and a half years, and latterly had suffered very much from hemorrhage. She was a patient of Dr. Ringland, and had come up from the South of Ireland and placed herself under his care, and to Dr. Ringland he was indebted for seeing the case. When he examined her, he found, in addition to the intra-uterine tumour, she had a large sub-peritoneal fibrous tumour attached to the uterus on

the right side. On the left side there was another sub-peritoneal tumour, which lay to the left and front of the uterus, and then passing the finger into the rectum he found a third tumour on the posterior surface of the uterus. It was these tumours, doubtless, that gave rise to the severe pain, for he believed it was a fact that sub-peritoneal tumours were accompanied with pain, whereas intra-uterine or intramural tumours generally were not. The os was about the size of a fourpenny piece. With a little manipulation he was able to dilate it to some extent; its margin was surrounded by a hard thin edge, which he divided with scissors in three places, and then he was able, without any difficulty, to pass his finger round the tumour. He then passed an écraseur in, got it round the pedicle, and divided it with great ease. The only difficulty in the operation was getting this mass out of the uterus. The pedicle was small and was cut off close to the surface. He had to seize the tumour with a vulsellum and to pass in a tenaculum and roll it out of the uterus.

Specimens of Mole Pregnancy and of so-called Uterine Hydatids.

Dr. T. MORE MADDEN said the cases to which he wished to direct the attention of the Society were of interest on account of the comparative rarity of their occurrence as well as from the difficulty of their diagnosis, which might implicate the character of the individual who was affected with the disease that gave rise to these productions. Some six or seven years ago he published a paper in the *Dublin Journal* on Ovarian Hydatidiform Disease. He had then seen but two cases of the kind. That the disease was of rare occurrence was shown by the fact that, in the Reports of some of the Masters of the Rotunda Hospital, but two or three cases were mentioned; and Dr. M'Clintock, after an experience of ten years in that hospital as Master and Assistant, mentioned but ten cases, in his work on the Diseases of Women, as having come under his observation. He thought, therefore, in the case of a disease of such rarity, it was the duty of every member of the Society, who had seen anything bearing on the question, to call attention to it. The first case he had to bring under their notice was that of a woman aged twenty-five. She had had two children, the younger of whom was between two and three years of age. At the time he saw her she imagined herself to be in the fifth month of her third pregnancy. She lived a short distance from town, and had been threatened with symptoms of abortion before he saw her. He found, on reaching her house, that the flooding was rather profuse. The os was about the size of a florin, very soft and dilatable, and he could only make out that there was a soft mass inside. About an hour after he came there was a smart dash of hemorrhage, and a large quantity of these so-called hydatids was expelled. They, to a considerable extent, filled the chamber utensil, and he collected some of them, which he now exhibited. They were of the ordinary character of the growth, varying in size from that of a small pea to that of a small grape.

After their expulsion the hemorrhage ceased, the uterus contracted, and the woman made a good recovery. The second case which he had to bring under their notice was an example of mole pregnancy. A woman came to him four months ago, telling him she believed herself to have become pregnant thirteen months before. She had had seven or eight children, the youngest of whom was six years old, was approaching her fortieth year, when the symptoms of pregnancy again presented themselves. Menstruation ceased, she commenced to suffer from sickness in the morning, her breasts enlarged, and at the usual time she declared she felt quickening. At the sixth month she fell downstairs, and the motion of the child, which she said she had felt, suddenly ceased, her abdomen became flat, her breasts became smaller, and she expected a miscarriage. Nothing, however, took place, and she remained in the same condition until the time she consulted him. On examination he found no sign of pregnancy. The uterus was a little enlarged, the breasts were quite flat, and the abdomen was not perceptibly enlarged. It occurred to him that there might be some disease of the uterus, and he introduced the sound and found the uterus larger than natural. The following morning when he came to see her she said she was in labour. She had had a good deal of hemorrhage and violent pains, and shortly after he arrived the specimen he now exhibited was expelled from the uterus. It was an example of so-called mole pregnancy. It was hollow, about the size of a small pear, was rather more than half an inch in thickness, and corresponded very exactly with the enlargement of the uterus. All the symptoms subsided, and at the end of a month the woman had her usual changes, and had since been regular. The case he had first described was of interest in one or two points. In the first place, there was the question, whether these hydatidiform masses were the products of conception? The usual opinion was that they were the abnormal growth of the chorion villi of a blighted fetus. Others held that they were placental growths; and others were of opinion that they were not always necessarily connected with pregnancy. He himself held the latter view. Cases were on record where women of unimpeachable chastity had expelled these hydatidiform substances from the uterus.

The theory that hydatidiform moles of the uterus are the result of cystic disease of the chorion, or the abnormal growth of the degenerated chorion villi of a blighted fetus, although applicable to the cases which Dr. More Madden had himself observed of this disease, was, in his opinion, clearly disproved as being the sole cause of these substances, by the numerous cases on record in which so-called uterine hydatids were expelled under circumstances excluding the probability of pregnancy. And he still adhered to the views he had formerly put forward to account for this fact—namely, that these exceptional instances might be accounted for by ovarian disease implicating one of the Graafian vesicles discharged from the ovary at each menstrual period, and of the growth of this diseased vesicle

after its escape into the uterus, until its increased bulk is such as to excite uterine irritation and expulsive action.

In one case which came under his observation the woman supposed herself to be seven months pregnant, and a small fetus of three months, perfectly formed, was expelled with a large mass of hydatids. In that case, no doubt, the hydatidiform mass was the result of the death of the fetus. He believed, however, as he just observed, that these hydatids might be developed in a woman without pregnancy.

The PRESIDENT asked whether Dr. Madden had to resort to any operation to remove the "mole" growth?

Dr. MADDEN replied that it was expelled by uterine action after a severe pain, and without any interference on his part.

The PRESIDENT said it appeared to him that they had been dealing with two distinct forms of disease—the hydatid and the mole. In his own experience he did not recollect any case of hydatid growth that was not the result of the degeneration of the ovum after impregnation; and in all the cases he had seen the hydatids were so far interesting as they were a generation, *per se*, superadded to the original ovuline growth—a gemmiparous generation that multiplies itself by division, a portion of the growth becoming detached, and thus forming another creature or succession of creatures by prolongation and contraction. The most perfect specimens of gemmiparous generation we have are to be seen in hydatids. The mole is a different structure. It appeared to be something more of intra-uterine polypoid growth projecting from the inner structure of the uterine wall, or originating in an effusion of blood into the decidual cavity or chorion cells, and eventually detaching itself from the place from which it sprang. He had met with some of these moles, in which it was necessary to detach a portion in order to remove them; but it was always a solid structure, and consisted of one mass. It seemed a polypoid growth, that detached itself from the uterus by absorption, and lay as a free growth within it.

Dr. KIDD would like to ask the President whether he had himself made any observation, or was aware of any recent observations that proved these peculiar growths to be true hydatids? So far as his knowledge went, and he had examined them microscopically—and they had been examined by many much more experienced microscopists—they are, at the present day, universally believed not to be hydatids at all; and all our best pathologists recommend that they should be called hydatidoid or hydatidiform growths. The disease found in the brain and liver, for instance, presented the true hydatid. These were distinct animals which grew in the form of a cyst, and the whole history and structure of them had been clearly made out. They were distinct animals which went through a whole series of changes, being taken in food in one form, and going through a whole series of growths or developments, which ultimately resulted in true hydatids, or acephalocysts; but no such history attaches to

the specimen before the Society, and he thought it important to observe the distinction between these growths and true hydatids which grow by gemmation.

The PRESIDENT said that some five-and-twenty years ago he read a paper before the Royal Irish Academy, in which he satisfied the Academy and himself upon the question of the gemmiparous growth of the hydatids. There were two distinctive growths in hydatids—those that were detached and those that were attached. The attached hydatid was that with which they were familiar as an ovarian growth, but there was no doubt the true hydatid was detached and was capable of an independent existence. In many of the hydatid growths, on the other hand, they grew by gemmiparous division, after contraction and narrowing occurred, but they did not become detached, and it was very rare in uterine hydatids to find them detached.

Mr. F. T. PORTER asked if Dr. Madden had submitted any of these hydatids to a microscopic examination?

Dr. MADDEN replied that he had not done so because the question as to the nature of these growths had been investigated by so many histologists, with the assistance of the microscope, that he considered it quite useless for him to endeavour to throw any light on it in this way. There were different ideas as to what caused them. One idea was that they were the products of conception; another was that they were not the products of conception but of ovarian disease; and a third was that they were of the same character as the hydatids found in the brain and liver of sheep. The last theory he had not referred to, as though some cases of true hydatids in the substance of the uterus are reported, yet, as a cause of hydatidiform mole, the idea of these being produced by independent animal organizations, or acephalocysts, as supposed by many of the older writers, seemed to have been exploded long ago.

Dr. M'CLINTOCK said if they entered into a general discussion on the question of hydatids, it might occupy them a long time. He must concur, in a great measure, with the remarks Dr. Kidd had made, and reiterate what he (Dr. M'Clintock) had said before, that the title "hydatid of the uterus" was a double misnomer. The disease was not hydatids, and it was not a disease of the uterus. In all the cases he had seen it had been the true vesicular disease of the chorion, and there was a complete absence of echinococci. It was not a disease of the uterus, but of the ovum. A more practical and important question connected with this affection was a medico-ethical one—namely, how far these morbid products were to be regarded as evidence of pregnancy having occurred? Of course there were cases where, if the practitioner announced that the expulsion of these substances was a proof of conception, it would amount to a very serious imputation on the character of the patient. When, therefore, they came from an unmarried woman, a man ought to be cautious in expressing his opinion. In no case that fell under his observation was

there any ground to doubt that the morbid growth was the result of impregnation. He was very much inclined to doubt, notwithstanding all that had been written on the subject, whether there was any clear indisputable case on record to prove that such a disease as this had existed in a virgin. It was possible that a woman nine or more months after she became a widow might discharge a hydatidiform product, without necessarily incurring a doubt as to her purity; for, as Dr. Madden had shown, it might be retained in the uterus beyond the period of uterine gestation. He did not deny that true hydatids might occur in the uterus, though he believed the occurrence of true hydatids in a cavity lined with a mucous membrane was extremely rare. He did not think they were ever found in the intestinal canal or in the bladder. He, therefore, did not think analogy confirmed the possibility of the formation in the uterus of a true hydatid growth. At the same time he should be unwilling to say that hydatid growths could not be found in the uterus of an unmarried woman.

Dr. HENRY KENNEDY said he had once seen a case in which there had been a large discharge of these hydatidiform products, and the patient subsequently lost her life from puerperal fever—blood-poisoning.

Dr. MORE MADDEN said the President had properly called attention to the fact that the two diseases which he had brought under their notice were dissimilar; and as that might appear to imply that he (Dr. Madden) made no distinction between them, he begged to direct attention to the title of his paper, in which the distinction was clearly marked,—viz., “to exhibit specimens of Mole Pregnancy, and of so-called ‘Uterine Hydatids.’” With regard to the question of the possibility of the latter occurring in an unmarried female under circumstances that precluded the possibility of pregnancy, he thought there were cases on record which should satisfy them on that point. Dr. Ashley, who had written on the subject, recorded a case where a woman, who had been a sufficient time in prison to prevent the possibility of pregnancy taking place, or, at least, to render it in the highest degree improbable, produced these growths in the uterus. The celebrated Dr. Cullen made a mistake in a case of this kind. Dr. Hamilton, of Edinburgh, was absent, and Dr. Cullen was called in to see one of his patients. He pronounced the case to be one of miscarriage. This woman had been separated from her husband for two years, and she lost her social position in consequence of Dr. Cullen’s opinion, was turned out by her family, and became an outcast. The substance expelled from the uterus was kept, and when Dr. Hamilton returned to Edinburgh he examined the mass, and pronounced it to be a case of uterine hydatids, and expressed his opinion that it was not the result of conception. He merely mentioned these cases, as the question was one of considerable interest. Another instance was on record of a female prisoner giving birth to a living child, and some months afterwards expelling hydatids—she being placed in circumstances where conception could not take place.

The PRESIDENT could confirm Dr. Madden's statement so far as this, that he had seen, after a natural birth, an hydatidiform change on the placenta, which left no doubt that it had undergone the change which produced hydatidiform growths.

A Case of Hysterical Convulsions, with some Remarks on Amenorrhœa.

By F. T. PORTER, L.R.C.S.I.

It is to be regretted that the subject of the nervous disorders of females has not attracted that amount of attention which has been extended to other more striking, but not less useful, questions.

I, accordingly, consider that a class of cases which contribute largely to the every-day responsibility of the practitioner ought to receive, at the hands of thinkers on medicine, the same consideration which has been devoted to questions of a more extraordinary, but comparatively unusual, nature.

The case which I am about to lay before the Society is one of hysterical convulsions. I also purpose entering into the consideration of the treatment of amenorrhœa, at the same time restricting my observations to the purely functional forms of the affection.

The case, which furnishes a remarkable instance of the effect of emotion in the causation of convulsive disorder, came under my notice on April 20th, 1873, on which occasion I found the patient, an unmarried girl, now in her twenty-seventh year, in a convulsive fit, which was followed by religious delirium and sobbing. She put me in possession of the following history of her case :—That she began to menstruate at thirteen years of age, and that she had enjoyed the best of health up to her seventeenth year, at which time her father died very suddenly. The intelligence of her father's death caused such a shock to her system as to induce convulsions. The convulsions were very frequent—three attacks often occurring in the course of a day. The menses stopped in October, 1872, but returned on 15th of last October. During the interval of the stoppage of the menses the fits became less frequent, but more prolonged. She entered a Surgical Hospital early in April, 1873, but remained only a fortnight under treatment. When in hospital she had been treated with bromide of potassium, which I learned from a prescription produced. She presented an emaciated and anemic aspect, and complained of loss of appetite, lowness of spirits, headache, spinal tenderness, and constipation. I found her suffering from the combined effects of hysteria, amenorrhœa, bromism, and strong tea. She stated that for four years she was too delicate to follow her avocation (that of a laundress). I commenced treatment by prescribing an aperient draught. I applied a blister to the nape of the neck. The headache was relieved by these measures. I followed up my treatment by the exhibition of valerianate of zinc in 5 gr. doses twice a day for a fortnight. The convulsions yielded like magic to this remedy. I then administered 2 gr. doses of extract of hemlock twice a day, and continued its use

for a fortnight also. I consider hemlock to exercise considerable power in nourishing the nervous centres. I do not, however, believe that large doses of the drug are necessary in the treatment of hysterical patients. At the end of a month from the commencement of my treatment the patient had had only one slight attack of convulsions, and has had no attack since. She is now well, and is able to follow her avocation, and suffers no inconvenience, except slight nervous excitement when menstruating. The case is interesting as demonstrating the effects of emotion; and the fact of a girl menstruating in her thirteenth year is not usual in this climate. It is also strange that the convulsions should have decreased during the period of the stoppage of the menses.

I consider hysteria to be a most unsuitable expression for a group of disorders by no means confined to one sex. The epoch of puberty bears a strong resemblance to that of dentition—in both there is an increased development of the nervous centres and a specialized evolution of nervous force. The so-called hysteria is referable to the increased nervous activity which, during puberty, is common to both sexes.

Practitioners are not alive to the advantage of observing the phenomena of puberty. It is probable that, owing to nervous disturbance, as many organic diseases are induced during the accession of puberty as during that of dentition.

I have not much faith in the drug-treatment of an emotional disorder like hysteria; but I prefer the valerianates, hemlock and lupulus, to the bromides. I consider the bromides to act most injuriously in hysterical cases. Their exhibition tends to derange digestion, to deprave the blood, to weaken the heart, and to retard menstruation. The devotion with which many practitioners adhere to the use of the bromides is a melancholy instance of the evil effects of fashion in medicine. When spinal tenderness co-exists with hysteria, I generally employ Corrigan's iron with considerable success. Much depends on the proper regulation of a patient's habits. Temperate meals, early rising, cold bathing, and active exercise in the open air are indispensable elements of treatment. The treatment is more moral than medical. The morbid excitability of the emotions, so common at the present time, is a fact patent to every observer; and the influences in this respect of sensational literature, long engagements, and a host of other social evils, ought not to be ignored. An ancient sage stated that all disease proceeds from the mind, and this is fully exemplified in the case of hysterical persons. Many writers consider the unmarried to be more liable to hysteria than the married; but, so far as my humble experience enables me to form an opinion, the reverse is the case. The most aggravated cases of hysteria I have had to treat occurred in married women. Family cares, pecuniary anxieties, prolonged lactation, and other causes, incident to married life, act as injuriously on the nervous system as any evils imputed to celibacy. Before alluding to amenorrhea, I purpose eliciting a few observations on the nature

of menstruation. Menstruation corresponds to the period of "rut" in the lower animals. The question naturally arises—why is the period of "rut" not accompanied by a sanguineous discharge, as is the case with menstruation? The theory that the menstrual discharge is surplus blood is a mere assumption. Dr. Ramsbotham looks on the discharge to be the rudiments of the deciduous membrane; but why, may I ask, is the discharge absent in all the deciduous mammals below the human female? The fact of the absence of this sanguineous discharge in the lower animals, coupled with the fact that it is scanty in women in the savage state, has induced me to form the opinion that its existence is, in a great measure, due to causes incident to the long-continued effects of civilization. It is to be regretted that the question of the final cause of menstruation has not been elucidated—it is a question pregnant with physiological interest.

I am anxious to elicit opinions as to the age most favourable to the healthful accession of menstruation. Some practitioners would have it that a girl should begin to menstruate at fourteen or fifteen; others, again, would fix seventeen as the limit. I am inclined to agree with Mr. Robertson, of Manchester, and consider a later period to be more in unison with the intentions of nature. Some authorities base their opinions on the observation of cases which, owing to the enervation incident to civic life and a highly artificial state of society, are but badly calculated to furnish materials for forming any sound conclusion on the question. It is strange to assume that the generative function should come into play before the nutritive processes so essential to the welfare of the individual have been perfectly consolidated. Such an assumption is opposed to the spirit of all sound physiological reasoning. There can be no more fertile cause of delicacy than the premature approach of menstruation. Such an event often engenders disease by drawing off the vascular and nervous energy so essential to the consolidation of the functions of nutrition and growth. The premature accession of menstruation is certain to be followed by the early disappearance of the function. The immediate cause of functional amenorrhea is, I conceive, an inability of the nervous centres to stimulate the ovaries. This inability may be owing to the retention of excreta in the blood. The suppression which often follows renal congestion after scarlatina will serve as an example of this cause. It may result from too little vascular pressure, as in anemia, or too great pressure, as in plethora. It is on the two latter causes I wish more particularly to dwell. In treating these conditions, practitioners neglect to bear in mind the influence of the sympathetic system on the blood-vessels, and they generally address their treatment to the blood itself. In plethora the sympathetic system is depressed. This is evidenced by the increased animal heat, contracted pupil, and vascular relaxation. I consider that in such cases belladonna is a most efficacious remedy. It has been used with success on the Continent, but I am not aware of any practitioners who prescribe it in this country for amenorrhea. I have often used it in

my own practice with considerable success. The late Dr. Graves used belladonna to relieve the cerebral congestion of typhus. It was that circumstance which induced me to employ it in the treatment of plethoric amenorrhea. In anemia the sympathetic system is in a state of tension, which is evidenced by the dilated pupil and diminished animal heat, and in such cases I generally administer small doses of opium before resorting to the ordinary remedies. Hemlock is beneficial when opium cannot be borne. It is probable that the good effects of hemlock in splenic tumours are owing to its effect on the innervation of the smaller vessels. Anemia, like plethora, is not, I conceive, so much an alteration in the condition of the blood, as it is an alteration in the innervation of the blood-vessels themselves. It is not my intention to touch on the local causes or treatment of amenorrhea. I will not notice the subject further than to say that local conditions, as a rule, depend on constitutional causes, and that consequently (but especially in the unmarried) all means of a constitutional nature should be resorted to before local measures are adopted.

Rupture of the Urethra and Perineum during Labour.

By S. M. MACSWINEY, M.D., &c.

June 1, 1873, I visited Mrs. D., Phisboro', stated to have been delivered at full term, of a still-child, twenty-four hours previously. I obtained, on arrival, the following history:—She was twenty-four years of age, and two years married. Some months after marriage her health became impaired, and she was under medical treatment for several weeks. Ten months after marriage she was delivered of twins, still-born. They were, it was calculated, of seven months uterine age. Since then she has been in fairly good health. She was attended in her recent confinement by a most experienced and respectable midwife, who tells me that she was called to Mrs. D., at six A.M., on Saturday, May 31st. Mrs. D. said she had had pains from about two A.M. of same morning. Labour proceeded very regularly and passed steadily into the final stage without any unusual symptoms. At eleven A.M. the child was born; slight traction was soon after made upon the cord, when it gave way, separating from the placenta. The case now became one of retained placenta, with which the midwife would not interfere. The husband was despatched for me, and, not finding me at home, brought Dr. Cranny, Assistant Physician, Rotunda Hospital, with him. When Dr. Cranny arrived, the placenta had already been expelled, and he did not therefore interfere in the case. The nurse was aware that there had occurred a rupture of the perineum of the woman at the moment that the body of the child had been born, but she thought it was slight, and did not then notice it particularly, further than by enjoining more than usual quietness on the part of the patient until her next visit. She accordingly visited early on the morning of June 1st, and learning from Mrs. D. that her water was every minute coming away from her, she examined her more

minutely. The result was that she ascertained the existence of a very extensive tear in the perineum, and immediately called for medical advice. So much for the previous "history" and account of the last labour of Mrs. D., as given by this very intelligent nurse to me on my arrival. I found her "present state" to be as follows:—Mrs. D., was a cheerful, healthy-looking young woman; her pulse was quiet; she had slept well, and she was free from pain or any symptom of fever. She had, she said, no complaint to make but "that her water was coming away from her" and keeping her in constant wet. Questioning her minutely respecting her condition before her labour, I learned that there had been some difficulty in making water for the last eight or ten days; that it would come regularly enough and in sufficient quantity at one time, scantily and with a certain amount of distress at another. She had tried to make water, she said, at ten P.M., on the night preceding the morning when her labour commenced, but failed to discharge more than a few teaspoonfuls. When the nurse saw her, at six A.M., she inquired about the water, and caused her to make an effort to pass some at once, but she did not succeed then. After the lapse of some couple of hours, however, she—when endeavouring to urinate—was noticed to void a considerable quantity of water into the vessel. The nurse remarked to her that this was her water, and the patient herself says it was the contents of her bladder she passed at this time, and that the only thing remarkable about it was, that it poured away in an unusually abundant stream. I found, upon examination, the following state of parts:—"The vulval opening extended back to, and was continuous with the anal. It was occupied by a quantity of very fluid, brownish-red coloured discharge, having an urinous odour. A catheter passed through the urethral orifice, in the ordinary way, made its appearance in the vagina, at a point about two inches from the external meatus. Following up this examination, a finger, cautiously introduced for further exploration, enabled me to ascertain that there was a complete transverse tear of the vagina and division of the urethra. The parts were much swollen and jagged, and the urine flowed, in constant drops, into the vagina. This poor lady was thus found by me, twenty-four hours after her confinement, suffering from a ruptured perineum, extending fully into the rectum, whose sphincters were torn across, and a urethro-vaginal tear of great extent. The urethra, two inches from the external meatus, had been torn across; the corresponding portion of the vagina had been similarly lacerated; the urethral wall protruded through the fistula, and formed a small, scarlet-coloured tumour. Naturally, the inquiry arose at once to my thoughts, "How has this dreadful injury occurred?" Now, it is certain that the laceration was not inflicted by the use of obstetric instruments, for none such were had recourse to; neither was the lesion brought about in the manner in which a vesico- (or urethro-) vaginal fistula is ordinarily produced, for there had been no prolonged pressure of the head upon the neck of the bladder or urethra—the

labour having been completed within the normal period of a natural confinement, and the injury existed immediately after the birth of the child. When the experienced midwife who attended this lady found that the placenta was retained, she made firm pressure over the uterus until the after-birth was expelled, but she did not even once introduce her hand into the vagina, and I feel sure that no amount of pressure upon the abdominal parietes over the uterus (even supposing, what is highly improbable in this instance, that it was excessive) would be at all capable of producing the lesion which actually existed. An ulcer on the vaginal wall, immediately over the urethra, might have extended so deeply as to cause the canal to be laid open by the pressure of the body of the child in its passage into the world; and there exist reasons for concluding that there had been some unhealthy action taking place in this region for some time previously. Still I fear that this, although a possible, is a somewhat far-fetched and improbable hypothesis, and, on the whole, I think that the most reasonable conclusion to arrive at is, that the bladder contained a large amount of water at the moment of the birth of the child; that a sudden and unusually powerful expulsive contraction occurred, which swept the uterine contents beyond the vaginal outlet before the parts were sufficiently dilated, and when, consequently, they gave way at their weakest points. This explanation may not be deemed satisfactory, and possibly is not the correct one, but I am unable to form any other opinion from the circumstances as they are known to me. Dr. Kidd saw this lady, with me, two or three times. He made a very careful and minute examination of the injured parts, and regarded it as a very remarkable and rare example of injury. I watched the progress of the case with much interest. There occurred a good deal of sloughing of the vaginal mucous membrane, and the aspect of the parts was very unsatisfactory for ten or twelve days. After this time, however, the appearances greatly improved; there was no "scalding" or pain; her general health and strength were excellent, and she thought, she told me, that the *constant* flow had ceased. She could now retain a wineglassful or more of water, which, however, came away when she changed her position, or stood erect. I ceased being in attendance after about six weeks, but have seen her three or four times since. The last time I saw her was about four months ago. At that time I made the following note:—"The *constant* dribbling of the water has ceased; she can hold half a tumblerful of urine in the bladder, and discharge it by her will; she is now rarely wet by its coming away involuntarily, and this only occurs when she keeps it too long. The complete division of the urethra, at the time of the accident, seems to have permitted of an attempt at a curative effort, much more so than if it were only partially opened, as occurs in ordinary *fistulæ*. There appears to be a new development of the muscular fibres of the urethra, which acts as a sphincter, and is sufficient to arrest considerably the involuntary flow of urine. The anterior (or outer) extremity of the divided

urethra is occupied, at the point of division, by a scarlet-coloured, protruded tumour, whilst the internal (or posterior) divided surface is considerably retracted and hidden away near the os uteri, and its orifice, leading into the bladder, difficult to be seen or 'hit' by the catheter. She has wonderful control of the rectum, and suffers, she says, extremely little inconvenience from the injury there." Since then I have not seen the lady, and, therefore, I know not whether she is content to await patiently the slow restoration to comparative health which at that time was undoubtedly in progress, or has sought other advice with a view, perhaps, to operative action.*

Dr. LOMBE ATTHILL asked, was the anterior portion of the urethra permeable?

Dr. MACSWINEY said it was, but latterly the water seemed to come away from the neighbourhood of the os uteri.

Dr. KIDD said that Dr. MacSwiney had been kind enough to allow him an opportunity of seeing this patient, and he had very accurately and carefully described the condition they found her in on the occasion of their first visit. She was confined on Saturday morning, and he saw her on Sunday afternoon. There was at that time a complete laceration of the perineum; the whole of the vagina was very much swollen; it was sloughy and soft, and the water was constantly dribbling away. There was one point in which he would supplement Dr. MacSwiney's statement, and that was as to the size of the opening into the bladder. It was so large that he passed his three fingers into it, and without using force he could have easily passed in his four fingers. The woman had no constitutional symptoms of suffering at the time; her pulse was quiet; her skin cool; she was placid, made little complaint, and, in fact, was one of the easiest-tempered women he had ever seen. He saw her about a week afterwards, and also a third time at the expiration of a few months. At that time she stated she had perfect control over the bladder; could retain water, and pass it at will. He passed a uterine sound through the urethra, and was able to bring fully into view the extremity of the divided urethra. He could see that the urethra had been completely torn across, the laceration being so complete that the

* The subject of ruptures and injuries of the genital tract has been fully and ably treated by Dr. M'Clintock, whose paper on "Laceration of the Vagina, in the Course of Labour" (*Dublin Quarterly Journal of Medical Science*, May, 1866), may be referred to by all interested in the subject with advantage. This eminent physician was not acquainted, at the time when his paper was written, with the history of any case in which "the lower portion of the anterior wall" of the vaginal canal was torn. But he cites a case, recorded by Drs. Johnston and Sinclair (No. 10, p. 344 of their book), in which there was a transverse slit of the base of the bladder, just at the point of relation to the vagina, which is a near approach to a rent in the lower portion of the anterior vaginal wall. Dr. M'Clintock likewise draws attention to Dr. M'Keever's Essay—"Practical Remarks on Laceration of the Uterus and the Vagina:" London, 1824—whose case (No. 1, p. 44 of the Essay) is an example of injury of the bladder in anterior laceration of the vaginal wall.

urethra and the bladder were perfectly detached from each other. The opening into the bladder had a puckered feel, as if the cicatrix had undergone contraction, and the parts had closed in. When he first saw her, he and Dr. MacSwiney examined and cross-examined the nurse in attendance very carefully as to the facts of the labour, and to his mind it was satisfactorily established that no instrument was made use of, and no violence used to which the laceration could be attributed. The whole of the second stage of labour was completed in a remarkably short period. There was only one further point to which he would refer, and that was as to the explanation of this occurrence. Dr. MacSwiney had suggested the idea that there was prolapsus of the bladder with water in it, and that it was caught between the pubes and the head of the child; and that the child being rapidly and forcibly driven out, caused this prolapsed portion to be ruptured. At first that seemed to him a very probable explanation, but on considering it afterwards, and remembering that the whole of the urethra was torn, he doubted whether that explanation was satisfactory. He was diffident in offering a suggestion. Cases of labour have occurred where the whole circumference of the vagina was torn by uterine action before the birth of the child, so as to completely detach the uterus, and allow it to come away with the placenta. Dr. Braxton Hicks has explained the mechanism of this. His idea is that the exit of the head being opposed, the uterus, as it could not expel the child, drew itself up, or glided up on the child, until it tore itself away from the vagina and all its other connexions. Dr. Kidd was inclined to think the same explanation would apply in this case. This woman had softened tissues. The exit of the head was opposed by the perineum; a violent pain occurred; the uterus drew itself up off the child, drawing up the anterior wall of the vagina with it, and in that way caused the laceration of this portion of the vagina of the urethra. At this moment the perineum gave way, and so saved the remainder of the vagina, and permitted the exit of the head. The woman described the pain with which the head was expelled as a very violent one. The recovery in such a case was most remarkable.

The PRESIDENT: Then you attribute the rupture to somewhat the same cause as gives rise to rupture of the tendo-Achilles, or of the patella.

Dr. M'CLINTOCK thought the case detailed by Dr. MacSwiney, with such remarkable perspicuity, was almost an unique one. He had met with, and carefully examined post-mortem, many cases of rupture of the vagina and rupture of the uterus, and rupture of both; but in all those cases where the vagina was ruptured, it was almost always the posterior and lateral part that gave way, and the tear always took a somewhat longitudinal direction. In this case, however, the laceration was in front. They all knew that the lower part of the uterus was liable to laceration under the efforts of parturition, quite independently of the use of any instrument, and that this might extend

and involve the lowest segment of the vagina, they were well aware. It would, *à priori*, appear not an improbable thing that a laceration of this kind might take place in front, but he had never seen such a case. The reparative power of nature in the case detailed was very remarkably exemplified—for, notwithstanding the rent into the bladder was so large as to admit of the introduction of three fingers, matters had so changed as to enable the woman to have some control over her bladder.

Dr. MACSWINEY said he had asked Dr. Kidd to see the patient, with a view to obtain his assistance in operative proceedings, and it was with that object he had instituted the exceedingly minute and careful examination which he had made, with the result of coming to the conclusion that operative interference at that time would be unadvisable. The only point as to which Dr. MacSwiney did not satisfy himself was the extent of the opening into the bladder. He was unwilling to go backward so far with his finger, but Dr. Kidd having made the examination, set that point at rest. There was not only this great injury to the bladder and the urethra, but the perineum was laid completely open, and for some time the contents of the bowel passed away without the control of the patient, and in her bed. It was the combination of two great injuries that made the case remarkable, in addition to their occurrence in labour. It appeared to him that, just as in an accidental wound of an artery, where the curative measure was division of the artery, something like that would take place in the urethra where it was partially opened, if it were divided altogether. Such a case was on record—a case described by an English surgeon of an injury to the urethra, in which there was an artificial sphincter formed at the vesicular end to prevent the trickling of the urine.

The Society then adjourned.

Obstetric Summary.

The Maternal Circulation in the Placenta.

Monsieur Delore, with the aid of drawings and histological preparations of the structure of the placenta, sums up his researches in the following conclusions, read before the Society of Biology :—

“The mother’s blood does circulate in the placenta : a fact demonstrated by Weber, Kölliker, Turner, Wincklen, and my researches only confirm theirs.

“To the naked eye the placenta presents the following appearances :—

“1st. Vascular orifices situated on the surface or at the circumference. The former are placed in the middle of the cotyledons, or on the level of the furrows or grooves between the cotyledons.

These orifices end in channels which are lost in the villousities of the placenta.

"2nd. The circular sinus, frequently interrupted, sometimes as large as the finger, sometimes thread-like ; on opening this sinus it is found to be lined by a greyish membrane, with orifices communicating with the interior of the placenta. Their forms are most variable. Fibrous columns are seen supporting the villousities and encircling these orifices, which are sometimes arranged in stages.

"3rd. When the circular sinus is wanting, it is replaced by orifices in the form of a grating. Their diameter ranges from 4 millim. to 1 centim. They consist of white fibrous tissue, arranged like a grating, the placental tissue showing in the interstices. Where these orifices occur, the placenta is occupied by whitish rugosities, like lobes or prominent lines. This structure seems to be the result of a special development.

"4th. The lacunal sinuses are central or peripheral.

"The peripheral are few and join the circular sinus freely.

"The great central *lacunæ* are met with in an average of 1 to 5. They are irregular and winding. Columns and orifices like those in the circular sinus are visible. Some placentas are furrowed by numerous sinuses, manifestly continuous with the circular sinus ; in others this continuity does not appear. I found epithelium in the circular sinus, but not on the surface of the placental villousities.

"The framework of the placenta is formed by the connective tissue sent by the chorion round the fetal vessels. In the interstices are inserted the cells of the decidua.

"The mother's blood bathes the villousities. This contact is proved by the following facts :—

"1st. An injection of the circular sinus penetrates the whole of the placenta. It is indifferent whether the injection is made by puncture or by the umbilical vessels.

"2nd. In still-born children, when the blood of the placenta has lost its colouring, the placenta contains recent clots.

"3rd. All sections show the villousities in contact with the corpuscles of the blood.

"4th. Another proof that the blood flows through the placental sinuses is the presence of vascular epithelium in them.

"I have not found arteries issuing from the uterus, either with the microscope, or by injections in the case of women dying soon after labour ; whence I conclude that the placenta is placed in the course of the uterine sinuses, and that it is consequently only a venous sinus traversed by the villousities."—*Gazette Obstétricale*.

Lectures on Puerperal Hemorrhage.

By Dr. CHARPENTIER, of Paris.

Diagnosis of hemorrhage of the first six months of pregnancy :—
Under this head Dr. Charpentier speaks of a frequent cause of

abortion in the form of ulceration of the cervix to which Richet has given the name of varicose ulceration of the cervix, which is said to penetrate deeply into the tissue of the cervix uteri. These ulcerations are mostly on the posterior lip, and are usually set up during a previous delivery or abortion, especially after obstetrical operations.

Under the head of treatment are recommended absolute rest, especially if the hemorrhage correspond to the time of a menstrual period; general bleeding, especially in women showing signs of uterine plethora; local bleeding as to anus, &c., if there be signs of inflammation of the uterus; opium, generally or locally, as in the form of enema per rectum.

Syphilis, which may be the cause of an abortion, Dr. Charpentier thinks should certainly be treated during the pregnancy. The ulcerations of the cervix should be very cautiously dealt with locally; general treatment being preferable. Chloral may be resorted to if opium should fail.

Dr. Charpentier speaks in detail of plugging, dilatation, and ergot, which are all useful at the proper times, but the two first require some discrimination in their use.

Referring to the use of perchloride of iron, Dr. Charpentier says:—

“But there is another method which, employed in England in grave hemorrhage from abortion, is at present absolutely rejected in France. I speak of perchloride of iron employed in the form of a swab or in injections into the uterine cavity. I only mention it now, proposing to refer to it in detail later on. What I wish to say here is that in the case of abortion its employment appears to me superfluous, for Dr. Barnes, its promoter, says that the condition of its employment is an empty uterus; but if the uterus is empty, it is because the placenta has escaped; the hemorrhage may then cease inevitably by the force of the uterus alone, or it yields to classical means. In any case it is never serious enough to cause uneasiness, and the ergot of rye in these cases is more than sufficient to shelter us from all accident.”—*Archives de Tocologie*.

Gynecic Summary.

Primary and Isolated Carcinoma of the Body of the Uterus.

Prof. Spiegelberg (*Archiv f. Gynæk.*, Bd. vi., Heft 1) communicates the following case of this rare affection. A woman aged forty-nine, who had never borne children, had suffered from a constant sanguineous discharge for a twelvemonth, and had had severe pains, which were worse at night, for the same period. The body of the uterus was uniformly, but not considerably, enlarged, retroflexed, and painful on pressure; the cervix elongated, but not swollen; the canal narrow, pouring out a copious puriform discharge. Attempts were

made, unsuccessfully, to dilate by laminaria and sponge tents; then subcutaneous injections of ergotine were tried, which brought on severe labour-like pains: this somewhat lessened the discharge, but the uterine cavity could not be reached. The woman then left the hospital for a time, and on returning sponge tents were again used, and the canal was dilated sufficiently to allow the finger to be passed in. The posterior wall was infiltrated, and covered with breaking-down masses; the anterior surface was free. The growths on the posterior wall were scooped off by a large curette, and a handful of encephaloid débris was removed. There was little hemorrhage. The patient went on well for eight days, when the pain, which had ceased, returned with greater severity. The uterus was now smaller and retroverted; dilatation was again employed. A broad ridge was now felt running transversely across the posterior wall and to the right; above and below this small patches of infiltration, and between them ulcerated cavities. The prominences were carefully scraped off, and as much as possible from the ulcerated surfaces. The hemorrhage was slight. The woman soon after became collapsed, and died with symptoms of peritonitis. At the autopsy there was diffuse peritonitis. The uterus was lying backwards against the rectum: the fundus and the greater part of the posterior wall had been destroyed; in the anterior wall there was a funnel-shaped opening into the abdominal cavity.

The Use of Sponge Tents in Displacements and Enlargements of the Uterus.

Dr. Klencke (*Deutsche Klinik*, 32, 1873) gives an account of three cases of chronic metritis and hypertrophy of the uterus, one of which was complicated by retroversion, which he successfully treated by the use of sponge tents. He adopted the treatment from Dr. Krone, who, employing sponge tents to dilate a retroflexed and hypertrophied uterus to ascertain if the increase of size was due to fibroid growths, found after several had been used that the uterus returned to its normal size and position. Dr. Klencke compares the effect of the sponge tents to that going on in the puerperal state. He thinks that in a slight degree a lochial condition is produced, through which the involution of the organ is brought about; and since the greater number of these diseases arise from an interruption to the puerperal state, this method may be looked upon as a continuation of and the complement to the normal process of involution.

The Lymphatics of the Normal Non-Pregnant Uterus.

Dr. G. Leopold (*Archiv f. Gynæk.*, Bd. vi., Heft 1) has been investigating this subject during the last two years, and has examined a large number of uteri. We are already acquainted with the arrange-

ment of the lymphatics in the serous layer, but until now their mode of origin in the mucous membrane and their course through the muscular layer has not been described. The subject is one of considerable interest to the obstetrician: the accurate knowledge of the course of the lymphatics may probably throw great light upon the different forms of puerperal fever, parametritis, &c.

The following are the conclusions at which Dr. Leopold has arrived:—

I. *The Mucous Membrane.*—1. The mucous membrane is made up of a framework of the finest connective tissue, the bundles of which are covered by endothelium; the spaces between these bundles are the lymph-spaces. 2. The membrane of the uterine glands consists, in the deeper layers, of a fine layer of delicate connective tissue, the bundles of which externally are covered by endothelium; but superficially it is formed only by a sheath made up of cell-plates. 3. The blood-vessels, from the finest capillaries, have a number of fine endothelial sheaths increasing with their size. 4. The framework of connective tissue is directly connected with both kinds of sheaths by means of fine twigs. 5. The glands and blood-vessels, therefore, pass through the lymph-spaces, from which they are separated only by their sheaths formed from the framework of connective tissue. 6. At the limits of the muscular layer the lymph-spaces extend a little (in the human subject deeper than in animals) into the funnel-shaped hollows between two muscular bundles, and gradually become narrowed into the intermuscular lymph-vessels and spaces.

II. *The Muscular Layer.*—1. In the muscular layer, both of animals and the human subject, there are lymph-vessels and lymph-spaces. The walls of both are made up of fine intermuscular connective tissue. The former are lined by fine endothelial *lamellæ*, which here and there have openings and gaps; the latter are lined by delicate cell plates. 2. In animals the characteristic networks of the lymphatic vessels are arranged parallel to the long axis of the two muscular layers; they therefore cross one another. Those of the inner muscular layer run into the lymph space of the mucous membrane, whilst those of the outer layer are connected with those of the subserous layer. The large canals, furnished with valves, which collect the lymph and are spread as a network over the horns of the uterus, lie between the two muscular layers, and receive all the lymph-vessels from both sides: externally those of the subserous and first muscular layer; internally, those of the second muscular layer and the mucous membrane. 3. In the uterus of the human subject the lymph-vessels are more complicated, on account of the arrangement of the muscular fibres. They are most abundant in the external layer, and in the other layers around the larger vessels, and are connected, as in animals, with the vessels of the subserous layer, but with those of the mucous layer mostly by the lymph-spaces. They unite together in the external layer, especially on the sides of the uterus, to form large canals, which very probably have valves. 4. The lymph-spaces,

both in man and in animals, surround the smaller bundles of a larger muscular bundle, and pass into the lymph-vessels. In animals, these spaces are indirectly connected with the canals in the serous and mucous layers, but in the human subject they are directly connected with those of the mucous layer. 5. The larger blood-vessels lie for the most part close to the collecting lymph-canals; the other lymph-vessels are accompanied by blood-vessels for a certain distance, and the lymph-spaces quite regularly have small vessels running through them.

III. *The Serous Coat*.—1. Only lymph-vessels are found under the serous covering. They lie in the subserous connective tissue, and form large and characteristic networks. 2. They are much less numerous than the subserous blood-vessels which lie over them, but they are from eight to ten times stronger. 3. They have large *ampullæ*, points of union, contractions, valves, and swellings, and give off branches to the deeper parts, either vertically or at an angle. 4. In the pig, rabbit, and sheep, the networks have mostly a direction corresponding with that of the long axes of the horns; in the human subject they cover the anterior and posterior walls in irregularly large or small groups; they have, especially at the insertion of the Fallopian tube, large *ampullæ*, and then pass on as an extended net upon the tube.

The Innervation of the Uterus.

Prof. Cyon (Pflüger's *Archiv*, Band viii., Heft 6 & 7, 1873) communicates the results of experiments made on animals on this point. Dogs and rabbits of different ages were used; some were put under the influence of curare before experimenting, others not. The following are the chief results arrived at:—1. The uterine plexus is the most important, if not the only, motor nerve, which can produce effectual movements of the uterus by the irritation of its peripheral ends. (Irritation of the central ends only gives rise to severe vomiting.) 2. Irritation of the central ends of the *first* two sacral nerves produces in a reflex way powerful uterine movements, which cease after the uterine plexus has been cut through. (Irritation of the peripheral nerves gives rise to powerful contractions of the bladder and the rectum.) 3. Irritation of the brachial, crural, median, sciatic nerve, &c., gives rise to no peristaltic movements of the uterus, but only causes a slight rigidity and paleness. 4. The effect of the irritation of these nerves disappears if the aorta has been previously compressed; but irritation of the central ends of the sacral nerves still causes, even after the closure of the aorta, peristaltic movements of the uterus. 5. Suffocation through continued interruption of respiration causes powerful peristaltic movements, probably through direct excitation of the involuntary muscular fibres by the accumulated carbonic acid gas.

The Diseases of the Urinary Organs during Pregnancy and following Labour.

Olshausen (*Beitr. f. Geburtsh. und Gynæk.*, Band ii. Theil ii. 1873) draws attention to the frequency during pregnancy and labour of various diseases of the urinary organs, such as catarrh of the bladder, pyelitis and nephritis. He thinks cystitis mostly results from the too frequent use of the catheter, which irritates the mucous membrane, and facilitates the introduction of air into the bladder, and at times, of the lochia. The nephritis is either catarrhal or interstitial and suppurative. The first as a rule runs a favourable course, and terminates at the end of eight to fourteen days. The symptoms are not well marked, and consist chiefly in spontaneous pains, fever, and albumen in the urine. The microscopical examination of the urine leaves no doubt as to the diagnosis. The renal disease is most probably due to the extension of the vesical catarrh along the ureters. The interstitial and suppurative form is rarely observed, and the author has only seen two cases. In one, death resulted from an intercurrent disease, and a number of purulent centres were found in the parenchyma of the kidney. In the second case similar lesions were found; but there was no albumen in the urine.

Amputation of the Vaginal portion of the Cervix Uteri.

Dr. Spiegelberg (*Arch. f. Gynæk.*, Band v. Theil iii.) has arranged in a tabular form, sixty cases in which this operation has been performed. Fifty-three of these have been under his care; the remaining seven occurred in the practice of Dr. Langer. He has employed different methods of operating, Simon's, Marion Sims', and Kuchenmeister's. The operation was performed for the following diseases:—For carcinoma twenty-two times; for simple inflammatory hypertrophy seven times; for conical and elongated cervix (sterility) five times; for beak-like and alar-shaped cervix ten times. The knife or scissors was used eight times; Sims' method six times; the knife or scissors and sutures through each labia three times; the *écraseur* four times; the galvano-cautery thirty-nine times.

Two of the cases ended fatally: one, a case of carcinoma, from opening up the abdominal cavity and secondary hemorrhage, after amputation with the knife, and too forcible drawing downwards of the uterus: one from pelvi-peritonitis and secondary hemorrhage after the removal of a carcinomatous cervix by the galvano-cautery; in this case the uterus was forcibly drawn down: one from shock after the removal of a hypertrophied cervix by the galvano-cautery: one from repeated hemorrhage after the removal of a carcinomatous cervix by the knife: one from septicemia after the amputation of an elongated cervix by the galvano-cautery. If we except this last case, for the woman was infected before the operation, there were four deaths in

fifty-nine cases. (Lisfranc had two deaths in thirty-seven ; Sims had one in thirty-six, and Huguier had none in thirty.)

The following are some of the most important conclusions expressed in the paper. The operation should always be performed in the natural position of the parts : four times the peritoneum was injured through the uterus being drawn down too much, and in two of these death followed the opening up of the abdominal cavity : in cases of carcinoma, or when the uterus is at all fixed, this caution must be carefully observed. The amputation of the cervix is not a grave operation when performed under favourable conditions. If the knife or scissors is used the wound should not be left uncovered, but some form of suture should be employed. Sims' method should only be used when the cervix is close to the vulva, or can be drawn there without any risk. The galvano-cautery is to be preferred to Chassaignac's *écraseur*, as much care is required in using the latter instrument to prevent injury to the neighbouring parts. The galvano-cautery is best used for carcinomatous cases : the knife for the hypertrophied and elongated cervix. The best position of the patient is the lithotomy position with the shoulders raised, as the uterus is the most pressed down into the pelvis. The best time for operating is ten to fourteen days before the expected catamenia.

Notes and Reflections on some Cases of Peri-Uterine Phlegmon.

By Dr. BOISSARIE.

The author gives some interesting cases of this disease. In one paraplegia existed for a year as the result of compression, ceasing when the retro-uterine abscess opened into the rectum.

In his "conclusions" the author makes, among others, the following remarks. In three cases out of four there was formation of pus and evacuation by the rectum ; in one case the pus broke into the abdominal cavity. Aran considered suppuration out of the puerperal state as a quite exceptional fact, and M. Gallard partakes of that opinion, but West in his works rejects that opinion, and admits that it occurs in fifty per cent.

Mistakes are frequently made as to the nature of these cases by the too common neglect of vaginal examination, and above all of rectal exploration.—*Annales de Gynecologie.*

On the Employment of the Actual Cautery in Uterine Diseases.

By DOCTOR LEBLOND.

Just mentioned by Celsus, and referred to by Percy in the last century, it remained for Jobert de Lamballe to introduce the use of the actual cautery into surgical practice for the cauterization of the cervix uteri.

As regards the physiological action of the actual cautery, it may be

remarked that the action varies according as the cauterization is profound or superficial, being destructive in the one case and modificative in the other. It is rarely painful. A circumstance which it is important to note is the absence of cicatricial tissue, even when the cauterization is profound. Reparation of the mucous membrane even takes place, and after a certain time no traces of the cauterization remain. There is no risk, therefore, of vicious cicatrices, nor of union of the cervix with the vaginal walls. The two chief diseases for which Dr. Leblond recommends the actual cautery are chronic metritis and cancer. In the stage of softening or infiltration from chronic metritis the iron should be used deeply, but in the latter stages, which are characterized by induration, it should be used lightly. In cancer, ablation of the diseased part by means of the galvano-caustic is the chief or only use for which M. Leblond would recommend it.

The use of the actual cautery is contra-indicated in peri-uterine phlegmasia, or phlegmon, ovaritis, and pelvi-peritonitis.

The author's "conclusions" are as follows:—

1. That the disease for the treatment of which the actual cautery is best indicated is chronic metritis, whether accompanied or not by ulcerations.

2. That in chronic metritis the cauterization should be profound or superficial—profound in the first period, or period of congestion; superficial in the second, or period of anemia.

3. That in cancer the actual cautery is rarely useful, and that, on the contrary, it may become very dangerous.

4. That acute inflammation of the uterine parenchyma, and above all a peri-uterine inflammation formally contra-indicate the use of the hot-iron, and that pregnancy should make one very cautious in employing it.

5. That the use of the actual cautery is nearly absolutely innocuous, provided always that one takes care to follow the advice given as to its application.

The advice given may be summed up by saying that common-sense rules should be observed in the application of the hot iron, and in the subsequent management of the case.—*Annales de Gynecologie*.

Ovariectomy successful in a Girl Eight Years Old.

Mr. Spencer Wells relates the following case in the *British Medical Journal*:—

"On January 27th, assisted by Dr. Tracy, of Melbourne, and by Mr. Thornton, chloro-methyl having been administered by Dr. Day, I made an incision, nearly four inches long, through the abdominal wall in the median line below the umbilicus, and divided the peritoneum to the extent of three inches. A free cyst was tapped, emptied, and drawn out with a solid mass at the base. There was a long pedicle, and I was able to pass a silk ligature and tie the pedicle

in two portions without including the Fallopian tube. I cut the ends of the silk close to the knots, leaving very little tissue beyond the ligatures on cutting away the tumour. The tied pedicle and the knots of the ligature were allowed to fall back into the pelvis. On examining the uterus and other ovary with one finger, I was doubtful which ovary I had removed, though I believed it was the left. The uterus did not feel as large as a walnut, and I could not feel an ovary, nor the ligature I had just applied. The wound was closed by silk sutures passed in the mode I usually practise in ovariectomy. During the passage of the sutures, there was more difficulty than usual in preventing escape of intestines and omentum, but there was no other peculiarity in the operation. A little ascitic fluid came away after the cyst.

"The solid portion of the tumour weighed three ounces, and the cyst contained twenty ounces of fluid. In the solid portion, there was a mass of bone covered with true skin, from which grew a quantity of long light hair. The hair was rolled into balls and matted together by sebaceous matter. The skin covering the bone was perfect, and lay on a bed of adipose and areolar tissue. The bone was proved on section to be true bone, not a mere calcareous degeneration. A full description of this cyst was given by Mr. Thornton when it was shown at the Pathological Society; and the specimen will be preserved in the Museum of the Royal College of Surgeons.

"During the first and second days after operation, the little patient had some pain, and was rather feverish. After the third day, recovery was uninterrupted, and she sailed from Liverpool for New York on the 21st of February, twenty-five days after ovariectomy."

Pædiatric Summary.

Whooping Cough depending upon a Fungus Growth.

Dr. Letzeuch (Virchow's *Archiv*, 1873, lvii.), believes that whooping cough is produced by a fungus growth upon the tonsils, the throat, and the upper part of the larynx. The proofs, however, which he has given in support of his opinion are not absolutely convincing. He remarked, during an epidemic of whooping cough, the remarkably satisfactory influence of quinine. Under its influence the paroxysms became less violent and less frequent; the duration of the disease was also shortened. He found one grave objection to the use of the quinine—viz., the injurious effect it exercised upon the digestive system. To avoid this he brought the drug directly in contact with the mucous membrane of the larynx by means of an insufflator; he tried this in three cases and the result was excellent.

NEW FRENCH JOURNALS.

FRANCE would appear to be resuming her old intellectual activity now that the severe injuries inflicted by a sad war are no longer so acutely depressing the spirits of our gifted confrères. The present year heralds the advent of two new French journals devoted to our department of practice. Each is edited by one of the foremost physicians of Paris, respectively supported by an able band of workers. We hope for much from these promising journals, and heartily welcome them.

The first two numbers of the *Archives de Tocologie* published under the direction of M. Depaul, contain portions of an able original memoir on peritoneal extra-uterine pregnancy, by Dr. Depaul, the pith of which we propose laying before our readers when the article is concluded. The memoir is elaborate and is illustrated with cases.

The same number contains lectures on Puerperal Hemorrhages by Dr. Charpentier, of which we propose giving a brief extract.

M. Gueniot contributes a paper on the "Treatment of Fractures of the Thigh in Children," by means of gutta-percha warmed and modelled to the limb, which appears to have been approved by the Surgical Society of Paris.

Each number contains also scientific and clinical reviews.

The second French journal devoted to our department is entitled *Annales de Gynecologie*, and is published under the direction of MM. Pajot, Gallard, and Courty, all able men. The introduction is from the pen of Professor Pajot.

The first article is an original one by M. Boissarie on Peri-Uterine Phlegmon, the chief points of which will be found briefly summarized elsewhere.

Dr. Leblond, who acts as chief editor, contributes an article on the employment of the Actual Cautery in Uterine Diseases. The conclusions arrived at by the author will be found in another column.

Dr. Lougnet contributes "Notes and Reflections on Purulent Infection of the newly-delivered by Uterine Phlebitis."

Dr. Charrier gives "A Case of Eclampsia, treated by Chloral and Induction of Labour."

Dr. Gallard contributes a review of Puerperal Diseases and the Causes of Mortality in Lying-in Women, in the general review, which is to appear regularly, of the learned societies.

Again we repeat our welcome, and trust that the only rivalry which may be known between our friends and ourselves will be the honourable rivalry of seeking the promotion of science and the relief of suffering women.

Obituary.

DR. JOULIN.

THE medical profession in Paris has sustained a great loss in the death of this eminent obstetrician. He took his degree in 1858, and became a Professeur Agrégé of the Faculty of Médecine in 1863. In recognition of his services the Imperial Government nominated him Chevalier of the Legion of Honour. A little more than a year ago he established a periodical of which he was editor and proprietor, called *Gazette de Joulin, Obstétrique et Gynécologie*. It appeared every fortnight, and a large proportion of the matter which appeared in it came from his pen. He was an exceedingly facile writer, and whether it were a scientific or a popular subject he had to treat, in both cases he was equally successful and happy. The works he has published are very numerous, the most celebrated being "Traité Complet d'Accouchements." On the 17th of March, whilst seeing his patients, he was suddenly seized with cerebral hemorrhage, of which he died a few hours afterwards. He was still in the prime of life, and his early removal is a serious loss to Obstetric Medicine.

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

"The Puerperal Diseases. Clinical Lectures delivered at Bellevue Hospital." By Fordyce Barker, M.D. London: J. & A. Churchill. 1874.

"Galvano-Therapeutics: a Revised Reprint of a Report made to the Illinois State Medical Society, 1873." Philadelphia.

"Report on Obstetrics and Diseases of Women." By J. R. Chadwick, M.D.

"Allgemeines über Exsudate in der Umgebung des weiblichen Genital Canales." By Professor Otto Spiegelberg, Breslau.

NEWS.

Dr. Gervis has been appointed Physician to the newly-constituted southern division of the Royal Maternity Charity.

Communications have been received from Dr. Malins, Dr. Braxton Hicks, Dr. G. Bantock, Dr. A. Cordes (Geneva), Dr. Geo. Myles, Dr. Routh, Dr. T. Chambers, Dr. Owen, Dr. Carter, Dr. Wiltshire, Dr. J. Young (Edinburgh), Dr. Tilt, Dr. Barnes, and Dr. Atthill, Dublin.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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Original Communications.

AN ACCOUNT OF THE EARLIEST ENGLISH WORK ON MIDWIFERY AND THE DISEASES OF WOMEN.

By J. H. AVELING, M.D.

Physician to the Chelsea Hospital for Women ; Honorary Member of the
Obstetrical Society of Dublin, &c.

IN the British Museum, among the Sloane Manuscripts, is one of the fifteenth century, vellum in quarto, beautifully written and illuminated, two hundred and thirty-four pages of which are devoted to Midwifery and the Diseases of Women.* From a note at the beginning we learn that it belonged to Richard Ferris, who was Master of the Barbers and Surgeons Company in 1563, and Sergeant Surgeon to Queen Elizabeth, and that at his death he bequeathed it to John Felde, who was to pay the executors for it “xxxxviiiis. iiiid.” Who the author of this interesting MS. was is not known. It is certain however, that he was well acquainted with the medical writings of Rogerius of Parma, who lived some time after Albucasis, and whose book was first printed in 1490. The arrangement of the chapters is almost exactly similar, and in some instances the text is a verbatim translation from Rogerius.

* Sloane MSS. 2463. A duplicate copy exists of later date, not perfect, 249.

The introduction, with its quaint spelling and obsolete words, runs as follows, the only alteration from the original being the extension of contractions.

“For as moche as ther ben manye women that hauen many diuers maladies and sekenesses nyhg to the deth and thei also ben shamefull to schewen and to tellen her greuances to any wyght Therefore I schal sumdele wright to herre maladies remedye Praying to god ful of grace to sende me grace truly to write to the plesaunce of god and to all womannes helpyng ffor charite ayeth this that euery man schuld trauaile for helpyng of his brotheryn and his susteryn after the grace of God that he hathe underfongyn And thowgh women haue diuers evelles and many greet greuances mo than all men knowen of as I seyde hem schamen for drede of reprevyng in tymes comyng and of discuryng off uncurteys men that loue women but for her foule lykyng and yf women be in dissesse suche men haue hem in despyte and thinke nought how moche dysesse women haue or than they haue brought hem in to this world And therfore in helping of women prevy sikeness the helpyng and that oon woman many helpe a nother in her sykenesse and nought discuren her previtees to suche vncurteys men

But neuerthles who so euer he be that displesith a woman for here sekenesse that sche hath of the ordynaunce of god he doth a gret synne ffor he dispisith nought allonely hem but god that sendith hem suche sekenesse for her best and therefore no man shuld dispise other for the disese that god sendith hym but to haue compassion of hym and releuen hym yef he myght

Therefore ye schal vnderstonde that women haue lesse hete in here bodies than men haue and more moistnesse for defaute of hete that shuld dryen her moistnesse and her humors But nethelès of bledyng to make her bodies clene and hoole from syknesse And they haue such purgacions from tyme of twelue wynter age into the age of fyfty wynter But nethelèsse somme women haue it longer as thei that ben of high complexion and both norissed with hote metes and wit hote drynkes and leven in moche reste And they haue this purgacion in euery moneth ones but it be women that be with

childe or ellis women that be of drie complexion and trauayle moch ffor women after thei be with child for to they be deliuered thei ne haue nought this purgacion for the childe in her wombe is norissed with the blood that thei shuld be purged of and yf thei haue purgacion in this tyme it is a token that the child refusith that blood and than that childe is fallen in to sume sikennesse or it wyl dey in his moder wombe Women that be of an high complexion and faren wel and leven in moche ease hauen this purgacion offer than ones in a moneth and this blode that passith from women in tyme of hir purgacion cometh oughte of the veynes that ben in the marice that is cleped the moder and norisscher to the childern right conceyved in hem The moder is a skyn that the childe is enclosed in his moder wombe and many off the sekenesses that women hauen comen of grevaunces of this moder that we clepen the marice

¶ The first is stoppyng of the blode that thei sculde haue in her purgacion and be purged as I haue sayde

¶ The seconde is to moche flowyng of suche blode and in vntyme and that syknesse febleth women full moche

¶ The thirde syknesse is suffocacion of the moder

¶ The fyrth is precipitation of the moder

¶ The fyfte is whan the moder is flawe fro with inforth

¶ The sixte is whan ther is a posteme of the moder

¶ The seuenth is the swellynge of the moder

¶ The eght is of trauaylyng that women haue in the childyng and the harde greuances that they haue or they ben delyuered

¶ The nynthe is the goyng oute of the moder be nethenforthe.

¶ The tenth is withholdyng of the secundine and ache of the moder

¶ To make a woman able to conceyve chyld yf god wyl

¶ Of bledyng ouermuche after that sche hath hadde her chylde

¶ Ffor swelling of womennes legges whan thei be with chylde."

These headings give a good notion of the contents of the manuscript. To enable the reader to form an estimate of obstetric knowledge and skill four hundred years ago, the following chapter is given in extenso.

"Of the Greuances that Wommen haue in Beryng of her Chyldren.

"Greuances that women haue in bering of her children comyth in two maners that is to say kyndely and vnkyndely Whan it is kyndelich the chyld comyth forth within twenty throwes and the child comyth in fourme as it shuld ffirst the heaed and sithen the nek and with the armes and shulders and with his other membres fourmeably as it shuld.

And also in the seconde maner the chyld comyth forth vnkyndely and that may be in 16 maners as ye shull fynde in hyr propre chapters and fyrst thus



Whan the childe hede aperith as it were hedelings and all the other parte of the chylde levith in the moder syde The help herof is that the mydwif with her honde anyoynted in oyles in oyle of pulioll and in oyle of lilie mesne or oyle musc ellen and as it nedith that honde so anyoynted and put in and fourmably dressyng the child with her hondes from the sides of the moder and the orifice of the marice so anyoynted well that the childe may come forth evenly—



The seconde maner is vnkyndely also whan the childe comyth with his feete joyntly to geder but the mydwif shall never haue it forth whan he comyth so douneward But when he begynneth to come so the mydwiff with her hondes anyoynted and yn put shove hym up agen and dresse hym so that he may come forth on the moste kyndely maner that he sqwat his hondes in the moder sides.

The third maner vnkyndely is yf the childes hede be so moche and so grete that he may not come forth The mydwyf than schal shove hym ayen and anoynt with May butter that is freshe or with oyle the orifice and the mouthe of the prive membre and than the mydwif ys honde put in so anoynted first and that membre made larger than brynge hym forth, holding the hed of hym.



The fyrth maner yf the child come forth ayenst kynde she that trauaylith schall be brought in to a schort straye bedde that hath an hygh stondying and sche put out her hede than the midwif hauyng her honde anoynted and put yn after that it is vnkyndeliche and ydressed hym rightliche and than so brynge hym forthe but the bedde that the woman schall lyggen yn schuld be made harde.



The fyfte maner agens kynde is if the child proferth his hande first forth and his hede be turned ayen and the mouthe of that priuie membre be streyte or schytte thanne with that constreynyng of the handes of the mydwyf that thilk way be larged and that the childis hande be put in agen that the child be noght slayne throughe the mydwifs defaute We commende the mydwifs honde putte in dressyng the childes schuldres to be put bakwards and her hondes rightlyche dressed to her sides and than the hed of the child take than so lete brynge hym forthe.



The sixte maner ayenst kynde is yf the childe profer forth his bothe hondes with his two schulderis and setlyng his two hondis that oon on that oon side and the other on that other side and the hed is turned bakward into the side ayenward



the midwyf with her honde schall put hym ayen as we saide in the next chapiter that is sche schal dresse his hondes to his sydes and take the childes hede and esely bryng hym forth yf he haue a little hede and his hondis yf he caste first outward the mydwyf schall ordeyn that the hede may come to the mouth of the priuie membre and so by hyr hands she shall bryng hym forth by the grace of god.

The seuenth is yf the child caste forth fyrste his right foot the mydwiff schall neuer bryng hym forth so But sche shall fyrst sette hyr fyngers and put it vp ayenward and after that sche schall putt yn honde and amende that fote with that other fote so corect hem bothe to geders If it may be and his hondis to his sides, and his fete so as thay out to ben and so bryng hym forth.



The eght is yf the child put forthe bothe feet and the tother dele of the childe left in the body bowande as we said first The mydwyf with hyr hand yshoven yn and she besiliche dressyng the chylde and so bryng hym forthe as I said abouen.



The nynthe is yf the childe schewe fyrst oon honde and oon foot and with the tother honde he helith his face The mydwiff settingh hyr fyngers of hyr oon honde in the grynde of the woman that trauaylith and with the tother honde put it vp ayen as we have shewid afore and so bryng hym forth yf thou mayst.



The tenth is yf the child schewe first forth his fete departyng and his oon honde bytwene his fete and his hede hanging bakward The mydwif with hyr honde putte in correctyng the chylde and leying hys oon honde by his other downe



by his sides and mending his hede on the best maner and the feete rightlich dressed and than the mydwif bryngyng hym forth.

The 11 is yf the childes nekke come first foreward than the mydwif hyr honde putte yn and shoue hym vp ayen by the shulders highyng lyft the chyld and so to the orificium bryng hym doune and so bryng hym forth.



The 12 is yf the child shewe fyrst forthe his knees bowed than the mydwif schall put hym vp agen bakward the hondes of the mydwif sette on other in hir gryndes and than hir oon hond anoyned and put yn and ther with amending so the knees and hym take by the schulders and so bakward softly bryng hym forth and so whan his fete be amended puttyng hym vpward vnto he be right as he schuld be and than bryng hym forth by the grace of God and the mydwifes connyng.



The 13 is yf the child schewe first forth his thyes and his comyng forth so erselying Than the mydwif with hyr honde put yn ayen by the fete she shal bryng hym to the orifice and evyn haue hym forth.



The 14 is yf the childes hede and the soles of his fete come togeder we bydde than the mydwif in to that prevyn membre her hondes in shove and he taken and borne vp in to the wombe ayenward than the childe taken by the hede and brought forthe.



The 15 is yf the child lyeth groveling or els vpright and his feete and his handes vpward abouen his hede than the mydwif with hyr fyngers put yn and the child evenyd than in as moche as she may lete the hede come forward and so bryng hym forthe.



The 16 is yf ther wer mor than oon as it happith alday and alle tho be comyng to the orifice at ones than lete the



mydwyf putte ayen oon with hyr fyngers the whiles she hathe forth oon of the children and than after another so doyng that the moder be noght repressed nother the children mysfaren with all as it fareth often tyme.

For to delyueren a woman of childe and for to sle it yf it may nought be brought forth Take rue saveyn sotherne-wode and gladon and lete hyr drynk hit And also take the jus of ysope of dyptayn an. ʒij quyksylver ʒij and this medecyn is proved Also take the jus of yreos and boles galle an. ʒiiij of mete oyle ʒij medle all these to geders and do it in a pissorie and serue the woman ther with and this medecyne will deliuer alle corrupcions of the marice and it delivereth hyr of a dede chyld and it wyl deliver hyr of her secundines and hit bryngith forth his menstruis.

And the greuances that women hauen in beryng of children comyth other whiles of the greuance of the childe and that may be for the childe is well ywoven in his moder wombe to fore sche hathe kaught the ydropesye and this the mydwif may alles well knowe and the woman also and other whiles it comyth through the feeblenesse of the moder that sche nys noght myghty to putten the childe oute from hyr and this may be in two maners as for gret sikenesse that the woman hathe hadde, and that hathe febled hyr moche Or for gret thought of the woman and if she conceyued in the fyrst of the twelve yeres Otherwhiles it comyth of the stoppyng of the moder and that may be in two maners as of fatnesse that stoppith the mouth of the marice and that withholdith the blode that she shuld haue ben purged of er that they hadde ben conceyued. Or otherwhiles it comyth for the

chylde is dede in his moder wombe and tokens ther ben Oone is that thei fele no steryng nor mevyng of the chylde within-forth Another is the secunde day of hir traualyng hyr mouthe stynketh and another is that thei felen gret ache and greuance aboute hir navell Another is dissolucion of hir face and of all hir body Another is that they desyren thynges that ben contrarious to hir Another is they have watche and litell slepe Another is that thei hauen gret pennance to make water and to go to privy and also that thei have gret pennance aboute the schare and yf the chylde cometh nought ought wardes as he shulde the mydwif may helpen wel yf now with outen any other medecynes as I have her afore tolde But yf her greuance be of ony of these that I haue rehersed make her a bath of hokkes of fenygrek of lynsed of wormode of sothernewode and of pelitorye of fenell and of mugwede soden in water and lete bathe hyr ther in a good whiles and whan she cometh oute of the bath let anoynt hir from the navel downward to the priuie member with butter and with deawte and with arragon byfore and behynde hyr Also an sithen make hir a fumigacion by netheforth of spice-nard ʒiiss and of the rotes of coste ʒj and also whanne she is comen out of the bath If she be a ryche woman geve hir ʒj of opibalsam with warme wyne If she be a pore woman sethe the rotes of coste and of mugwede in wyne and do ther to ʒij of boles galle and lete her drynke it whan she comyth out of the bath Other tempre borax ʒij with wyne and geve her that to drynke Other geve her the jus of diptayn ysope an. ʒiij argenti vis. dp and this wyl casten ought the childe quyk or dede and beter and if it be yoven with a trocisci of mirre after Rasis ordinance take of mirre ʒij lupinus ʒiiss of rue leues dried with wylde mynte of puliol woderofe of sernum of asfetide serapin opopin galbanum gum an. ʒviiij of fyne maluesye as it nedith make balles as it were table meyne of the weyght of ʒij eueryche of hem weiging Geve hir oone of ham with decoction of junipery in wyne for these ben good for hevy birthes and to bringe forth the secundines and destroyeth molam matrices Yeff these may not ben hadde make a plastre of mugwede soden in water and emplastre the woman ther with from the

navel to the priue membre for it makith a woman sone be deliuered of her child Yf it be quyk other dead in her wombe and it drawith oute the secundine but let it not ligge ful longe for it wyl drawe the moder out also A noble precious poudre for women that ben in trauaylyng of child and for after throwes Take ʒiiij of the scales of cassiefistula and an ounce of saueray and another ounce of ysope poudre alle these in fere and geve it the woman with the jus of vervayne ywarmed and hit ydronke it maketh hyr sone to be deliuered and it drawith out the secundine also it maketh a woman that is stopped sone to be deliuered by the purgacion of hyr bloode Also ciclamen ystrawed vnder a woman whiles she is in traualyng it makith her sone to be deliuered.

The jus of vervayn doth also ydronke Other lote hyr drynke an ege schell full of the jus of leek other of dyptayne hokkes also sauen hath a gret myght to deliueren a woman of childe and so hath the water of a mannes leer that he hath wasshen in his hondes.

Tokens when a woman shall be deliuered of childe ben gret steryngs and mevyngs in hir wombe and other whiles all the wombe mevith vp to the stomak and makith a woman to haue gret wylle to caste and she hath moche hevinesse about the navell and than the childe sterith faste to passen from his moder than lete stoppe hir nosethrilles that the spirites mowe go downe to the moder and comferte hyr of hir burthen and lete gyrden hyr with a gyrdell of an hertys skyn and yef she swowne lete putt swete smellyng things at hir nose and lete froten the soles of hir fete and the pawmes of hir handes with kene bitynge thynges as with vynegre and salt Baume Opobalsam ymade in maner of a suppositorie maketh a woman ben deliuered of childe and it drawith out the secundine also but it makith hir bareyne euermor after And the jus of rue and of mugwede makith a woman sone be deliuered of childe though it be deede in hir wombe and it is profitable to make hem to snese with poudre of peper and of castory and caste it in her nose and the jus of the saturey ydronke makith a woman sone be deliured of childe and yf the herbe be plasterd to her

wombe it makith the childe come out quyk or dede A precious stone that highte Ysapis hathe a gret vertue to helpe woman that they were deliuered of childe also doue yeven a woman that hath a dede childe in her wombe the mylk of a betche medled with honey and make a plaster of wormote and bynde hit to hir left hye also womans mylk and oyle togeder ydronke makith a woman to be deliuered of childe."

It will be observed that the midwife's duty consisted principally in shoving the child back again when it did not present kindly. If this did not answer, she was to use therapeutic measures. More energetic means were, however, sometimes employed, for in the next chapter we find the following :—"Ther was a woman and she was deliuered by the wyndyng of two towailles aboute hir myddell and twoo stikkis The oon was wounden on the oone syde off the woman and the other wounde on the other syde of hyr till the wombe of hyr was made right small and the woman hadde right fayre children yet ther after." In cases of retained placenta, the author also says, "The mydwif shuld anoynt her hondes and with hir nayles pullen owte the secundine if she mowe." This manuscript is of much historical interest and should be published.

ON THE TREATMENT OF ANTEFLEXION OF THE UTERUS BY A NEW FORM OF INTRA-UTERINE PESSARY.

By GEO. GRANVILLE BANTOCK, M.D.
Physician to the Samaritan Free Hospital for Women.

(Continued from p. 9.)

IN his recent work Dr. Barnes reiterates his opinion as to the seat of obstructive dysmenorrhea with which I am dealing. At page 219 he says : "Narrowing of the os uteri internum, as brought about by flexion or angulation is not uncommon ; narrowing of the os externum is very common." My experience tells me that the reverse of this is true. At page 228 he says : "If the sound will pass we may be satisfied as to the efficiency of the os uteri internum ; and in my ex-

perience it is very rare indeed to find serious difficulty in passing it." "If it does not pass readily, by far the most common cause is excessive flexion, mostly retroflexion of the body upon the cervix." "The point of angulation is *at or near the os internum*, so that the sound will not pass unless the body be lifted up so as to straighten its axis, or the sound be much curved." Exactly so, and it is this angulation of the body *at or near the os internum* (which is equivalent in its action to constriction) which causes the dysmenorrhea. Dr. Barnes says "it is *very rare* indeed to find serious difficulty in passing" the os uteri internum. Though it may be presumptuous in me at any time and on any subject within the range of gynecology, to enter the lists against so high an authority as Dr. Barnes; yet in the present instance I do so with some confidence, and I appeal not only to my own experience in a large number of cases in which my attention has been specially directed to the point at issue, but to that of those who are accustomed to treat such cases. I very rarely meet with a case in which the passing of the sound through the os externum causes pain in cases of dysmenorrhea, but it is matter of almost daily occurrence to meet with cases in which the sound causes pain as it passes the os *internum*; and what is the more convincing is that as the sound passes the os *internum*, then only does the patient liken the pain to that which she suffers at her menstrual periods.

The following case appears to me conclusive on the point at issue :—

Mrs. F., aged twenty-six, began to menstruate at the age of seventeen. Pain began a day or two before and increased as the flow appeared, being at first felt only in the hypogastrium, but extending down the thighs as the discharge came on. The quantity was usually scanty, and the flow lasted over two days only. She married at twenty-one, and from that time till two years ago the dysmenorrhea went on increasing till at last she was obliged to seek relief, when she consulted Dr. Barnes. At that time she suffered from great pain of a paroxysmal character for more than a fortnight before the appearance of the flow, at times so severe that she

often rolled on the floor in agony. In fact, as she expressed it, she used to have scarcely a week at a stretch of anything like comfort, and that was during the week following the discharge. Dr. Barnes divided the cervix in his usual way (I presume) in Oct. 1871, and for several periods she scarcely suffered at all, while the quantity increased, and the flow lasted from three to five days. Then the pain began gradually to return until, at the time she first consulted me on the matter—viz., in Oct. 1873, it became so severe as to require treatment. The periods were then more frequent by three or four days, and for a whole week preceding the flow she suffered from pain of varying intensity. For three or four hours preceding the appearance of the flow the pain was of a forcing or stretching character, and it decreased somewhat after the first day. At a subsequent date she said the pain was similar to that caused by the swelling of a tangle tent. Frequent micturition was a constant attendant on the menses. The patient had been the subject of constipation for some months, and had been under treatment for several weeks.

Nov. 2nd, 1873.—On examination I found some congestion of the vagina and cervix, and a glairy discharge hung from the os externum, which was large enough to admit the tip of the index fingers; the body was acutely anteflexed on the cervix, so acutely as to make it difficult to introduce the sound: and it required not only a sharp curve in the instrument, but the assistance derived from pushing up the body of the uterus to overcome the difficulty. I attempted to pass a stem, but without success, although I held the interior lip with vulsellum forceps. It would not pass the internal os. I then took a sea-tangle tent as large as a No. 5 catheter, and paring the point gradually to that of a No. 2, finally succeeded, after considerable difficulty, in passing it through the internal os and up to the fundus, causing thereby great pain. Leaving it for half an hour I then pulled the uterus as straight as possible, withdrew the tent, and introduced the stem. This also caused considerable pain, as it passed the internal os, and again the patient defined it as resembling that caused by the advent of the flow. The external os

readily admitted the cervical enlargement of the stem. Prescribed $\frac{1}{2}$ gr. opium every six hours if required, and ordered her to keep in bed.

3rd.—Pain almost entirely ceased after the third pill. Walks about without pain, and complains only of a feeling of "pressing," such as usually preceded the menses.

4th.—Complains still of her old pain and a feeling of pressure in epigastrium and corresponding part of back. In the hypogastrium feels as if unwell, but no actual or acute pain. There is a considerable sanguineous discharge.

8th.—The discharge continued accompanied by the same symptoms till the 7th, in quantity much exceeding what had been usual for the last year and a half, and approached more nearly to a normal amount. After a fit of coughing began to complain of pain, rather acute and different from any she had felt since the introduction of the stem, and on being sensible that the stem was loose in the vagina she removed it this morning. Complains of pain on sitting. Discharge has ceased. During the whole period has not suffered as before from frequent calls to micturition.

On the 10th and 15th there being considerable congestion I drew a little blood by punctures in the cervix, and on the 19th I repeated the operation.

22nd.—Again attempted to pass the stem, but failed until the internal os had been opened as before by a tangle tent, when it passed readily. I then washed out the uterine cavity with Condyl's fluid through the canal of the stem, and purposely left the uterus anteverted.

23rd.—There has not been enough pain to require an opiate. A slight coloured discharge in the night. Uterus retroverted. Replaced it. Ordered patient to avoid lying on back, and to have an enema.

24th.—Occasional pain in left groin while sitting, and in sacral region when lying. Uterus again retroverted. Introduced a Hodge, which gave immediate relief in all positions.

25th.—Very comfortable since last night. Washed out uterus with Condyl's fluid as the discharge was slightly offensive.

Dec. 3rd.—Patient had a slight show on the 30th ult., none on the 1st, more on the 2nd, and to-day when it is better in colour, and more abundant than for many months. Has a little discomfort in left groin on walking.

26th.—The last menstrual period lasted in all nearly a week, and the quantity was normal. Uterus anteverted and causing a little pressure on the bladder. Removed the Hodge, and introduced next smaller size.

28th.—Pain in left groin last two days. Instruments in good position.

Jan. 8th, 1874.—Menses appeared on 28th, a mere show for two days, free for four days, and all discharge ceased on 7th, for the last three days being very pale. Complains of an aching in left groin more or less constant, and a pricking sensation when urinating.

9th.—Removed Hodge, which was quite bright.* No discharge. Uterus anteverted. No tenderness in region of left ovary or broad ligament. Ext. belladonna gr. $\frac{1}{2}$ and ext. cannab. ind. $\frac{1}{2}$ in suppository every night.

10th.—The suppository gave a little relief, but the patient decides to have the stem removed. Uterus in good position. Removed the stem, the metallic portion of which was quite bright. A slight calcareous deposit where the limbs joined the body. Uterus remains anteflexed. Continue suppository.

27th.—For last fortnight has had much less pain than previous to commencement of treatment. Has no pain now indicating approach of menses.

Feb. 3rd.—Menses appeared on the 30th ult. without any pain, and lasted only two days. Feels quite comfortable now.

Mar. 5th.—Menstruated on the 27th and 28th ult. and 1st inst., experienced merely a feeling of *discomfort* the day

* For the last year or two I have discarded all india-rubber and gutta-percha pessaries, using instead instruments made of pewter, which are not only lighter than the former, but set up less irritation. Some of my patients have worn these instruments for the greater part of a year, and at the end of that time they have been removed quite bright and clean. Their use is never accompanied by the offensive discharge which the others produce when vaginitis happens to be set up. They are made by Krohne.

before, but *no actual pain* either then or during the flow. The quantity was small but the colour very good. In every respect feels much better than before the treatment was begun, and is so satisfied with the result that after her return from the Continent, whither she is about to proceed, she will again have recourse to the stem treatment, should the symptoms return.

I have given this case at considerable length ; almost as it appears in my notes, in order that my readers should be in full possession of the details of a case which I regard as a test one. There can, I think, be no doubt that this patient had anteflexion at the beginning of her menstrual life, and it is worthy of remark that the symptoms attending it were aggravated, as I have so frequently observed, by the married state. As the menstrual process became repeated and an obstacle was presented to the free escape of the flow, the uterus became more and more the subject of more or less permanent hyperemia, which in course of time extended to the ovaries. Thus the condition of hyperemia, which in the healthy and normal state of the organ is necessary for the performance of its appointed function, became a morbid one which interfered with it. Hence we find the patient, who is the subject of this condition, at first complains of pain only during the periods, and refers that pain to the uterus as its chief seat ; but as the uterine tissues undergo changes, the necessary result of obstructed blood flow, the congestion extends outwardly involving the broad ligament and ovaries in the same process, and then it is that we find her complaining for a longer or shorter period of time before the appearance of the flow—*i.e.*, during the process of maturation of the Graafian follicles. If the patient at the same time suffers from constipation, we find the left ovary more affected than the right. I have a distinct impression that constipation is a very frequent concomitant. Hence the removal of this condition is a necessary element in the treatment. The reasons are obvious. In the case just recorded these views are clearly borne out.

It may be objected that I am claiming more for the instrument than is its due, that the patient is not cured and

that the symptoms may return. I point with confidence to the fact that, although the congestion of the uterus had not been reduced to the extent to be desired, that I was anxious to afford temporary relief before the patient took her contemplated trip in the spring, and that although the instrument was retained for a shorter period than I desired, yet the result was almost complete removal of the symptoms from which the patient sought relief. It will be seen that the flexion was not much altered; that the os externum was already of such diameter that by no method of reasoning could it be regarded as the seat of obstruction; that the increase of diameter of the os internum was sufficient to remove the dysmenorrhea; that it was only when the os internum was involved in the successive operations that pain was produced; and that the pain then produced was similar to that felt at the menstrual periods. The free discharge which followed the first introduction of the stem was doubtless beneficial by emptying the engorged vessels of the uterus, and it taught me to imitate nature's method in the bleedings which I subsequently practised, and was prevented from doing at the first by the nervous condition of the patient. The increase in diameter, then, was due to the instrument. That the symptoms will return I am almost persuaded, but that I can remove them again I am more confident. I cannot say that I have cured the patient, but I think it will be allowed that I have at least gone a considerable way in the right direction towards that result. It is a matter of experience with me that if the stem be worn for several months, the internal mouth does not recur to its former size provided the patient escape an attack of metritis.

Since the publication of the previous part of this paper, I have seen the patient whose case stands third, and to this day (now extending over a period of a year and a half), she has had no return of the dysmenorrhea, while the periods recur with great regularity at normal intervals, and the flow is of normal quantity.

As a stricture of the urethra does not at once attain its maximum but by gradual change in the tissues, under the influence of protracted congestion, or a minor degree of

inflammation, so I believe there is a gradual change wrought in the tissues of the uterus at the site of the internal mouth, either in the form of hypertrophy of normal, or deposition of morbid, elements. Dr. Matthews Duncan denies the analogy, and even the occurrence of stricture. Dr. Barnes in the work already quoted, admits the occurrence of hypertrophy. In the early stage this condition may be remedied by similar treatment. This method is not without its advocates in the greater number of cases of dysmenorrhea. I have recently had under my care at the Samaritan Free Hospital, a case of a young unmarried woman who applied to me for the relief of dysmenorrhea of three years' standing. There was no flexion, but the cervix was conical, and the external os was small. The sound caused great pain on passing the os internum only. I introduced the sound twice a week during the interval between two periods, on each occasion leaving it in the uterus for fifteen minutes. Her next period was absolutely painless during the flow, though she had a little pain for a day or two before. On the other hand, when flexion has been present the frequent introduction of the sound has produced no benefit.

Several questions remain for consideration, such as the dangers to be guarded against in the use of the intra-uterine stem, the difficulties in the way of, and objection to, their employment, and others; but I must defer them for the present.

I will now only add that the instrument herein described has been made for me by Mr. Krohne of Duke Street, Manchester Square, and Whitechapel, who has very intelligently carried out my instructions.

(To be continued.)

HISTORICAL NOTE ON THE INJECTION OF PERCHLORIDE OF IRON IN POST-PARTUM HEMORRHAGE.

By F. C. FAYE, M.D.

Professor of Midwifery in the University of Christiana ; Physician in Ordinary to the King ; Honorary Fellow of the Obstetrical Society of London, &c.

WILL you kindly allow me, as a historical rectification, to observe that the use of perchloride of iron in post-partum hemorrhage justly is due to the late Professor d'Outrepoint, of Wurzburg, who used it in the same manner as it is now used, and wrote about it about thirty years ago.

Since that time, and during the whole of the time I have been appointed to our Clinical Lying-in Hospital, I have frequently used the method, and generally with decided benefit. The theory about the blood-poisoning and septicemia is really a mere phantom. Sometimes it is necessary to use the compression of the aorta through the abdominal wall, but even in this case the injection of a solution of the perchloride of iron is of great utility.

My printed Reports from our Maternity, so far back as 1847 and the following years, very often bear testimony of the beneficial effect of the fore-named injection. In a case when a medical man here used it against hemorrhage after a premature confinement, there almost immediately came on strong pains in the belly, probably in consequence of a too rapid injection, and of the tube of the syringe too closely obturating the os uteri internum, the simultaneous efflux being thereby hindered. The patient recovered.

I have never myself seen any bad result of the injection of perchloride of iron.

Will you be so kind as to notice this little historic elucidation in your valuable Journal ?



General Correspondence.

(To the Editor of "*The Obstetrical Journal*.")

A NEW FORM OF INTRA-UTERINE STEM.

SIR,—I am much indebted to my friend Dr. Bantock for the prominence he has given to my name and instrument in the last number of your Journal, as a hook upon which to hang his own more prominent name, and yet more perfect instrument. When I introduced my stem to the profession, after several years' practical experience of its merits, I distinctly stated that it was a modification of the late Dr. Wright's. The substitution of vulcanite for steel in its manufacture, and the sundry modifications in its general outline have so changed the instrument that it has nothing in common with Dr. Wright's stem save the principle.

I have to-day carefully compared Dr. Bantock's "new form of intra-uterine stem," with one I have had in use more than ten years (Dr. Greenhalgh's, I believe). I find there is a wonderful family likeness between them. The only difference that I can see is, that Dr. Bantock has substituted metal limbs for vulcanite, which may or may not be an improvement. Dr. Greenhalgh's stem is straight and flat, having a central cavity, and Dr. Bantock's is straight and round having a similar central cavity. Dr. Bantock's stem is (without acknowledgment) as much a modification of Dr. Greenhalgh's as mine is of Dr. Wright's. Dr. Bantock says: "My first instruments were made entirely of vulcanite, but I soon found that the material when reduced in thickness so as to allow approximation of the limbs without fear of fracture became so soft at the temperature of the body that the limbs first became straight, then the instrument made a quarter turn, and ultimately the limbs became bent in one direction by the force of the flexion, giving one a tolerably accurate cast of the degree of flexion and the curved form of the uterine cavity." Dr. Bantock here insinuates that my stem "becomes so soft at the temperature of the body" that it is altogether

useless because it is made of vulcanite. For Dr. Bantock's information I may be permitted to state that my stem is "reduced in thickness so as to allow" complete "approximation of the limbs without fear of fracture," its weight being only *thirty* grains, just half the weight of Dr. Bantock's instrument, yet it is altogether *unchanged* at a temperature of *two hundred and ten degrees*. These are simple facts which neither Dr. Bantock nor any other person can controvert. It must be further borne in mind that my stem being only the size of an ordinary uterine sound, can be introduced without either dilatation or incision, whereas Dr. Bantock's, from its size, cannot in ordinary cases be introduced without previous dilatation or incision. With respect to Dr. Savage's question, "Why does the stem remain *in situ* in some cases and come away in others?" Of the fifty-four cases in which I have used my stem, where it has been retained for periods varying from a few days to six months, it has been only displaced in three instances: in two instances free hemorrhage took place a few hours after its introduction, a large clot formed round the head of the stem, the weight of which dragged the stem from its position; this was clearly proved to be the case, inasmuch as the stem was found to be imbedded in the clot after it had passed out of the vagina. In the third case the stem was expelled by powerful uterine contraction. This I believe to be the most frequent cause of displacement. In such cases the stem can be well retained after the uterine irritability has been subdued. The best means of accomplishing this is to introduce the stem for twenty-four hours, and then withdraw it for an equal period and reintroduce it, after two or three introductions the stem will be retained excellently well. I have seen several such cases. Dr. Bantock says he has never seen the stem expelled in anteversion: it is a curious fact that the three cases in which the stem was expelled in my practice were all cases of anteflexion reduced by the stem to anteversions.

Yours faithfully,

THOMAS CHAMBERS.

BOLTON ROW, MAYFAIR, W.
April 14th, 1874.

DR. SNOW BECK'S CASES OF POST-PARTUM
HEMORRHAGE.

(To the Editor of "The Obstetrical Journal.")

SIR,—In the OBSTETRICAL JOURNAL for Feb. 1874, there appears a paper on "Uterine Hemorrhage" by Dr. Beck.

That paper contains amongst other things a detailed statement of two cases of hemorrhage ending fatally, which the author, Dr. Beck, says, "have come under" his "notice."

These two cases were, it is stated by Dr. Beck, "conducted by a professor of midwifery in one of the largest medical schools." Dr. Beck gives no further clue to the individuality of the medical attendant in these cases, nor further proof of the accuracy of the reports of the cases, than his own statement.

By implication, these cases are fastened on Dr. Playfair, or myself, as being the only teachers of midwifery in the metropolis bearing the title of "Professor." Dr. Playfair has already repudiated them. For myself, I can only say, that while the two cases in question bear internal evidence of purporting to be cases which occurred in my own private practice, the facts of the cases, and the details of the treatment related by Dr. Beck, are absolutely untrue in their most essential particulars.

I shall not consider it necessary to enter into any further discussion on the matter unless Dr. Beck asserts that these were cases which occurred in my practice, and also furnishes the source of his information respecting them, and further explains how it is that the treatment pursued has been so misrepresented by him.

I am, &c.

GRAILY HEWITT.

BERKELEY SQUARE, April 14th, 1874.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

MAY, 1874.

DISRUPTION AT THE SOHO HOSPITAL FOR WOMEN.

THE Hospital for Women in Soho Square may be fairly ranked among the larger metropolitan medical charities. It has been established thirty-two years, has seventy-two beds, and receives during the year at least, four hundred in-patients and three thousand out-patients. The medical staff consists of three physicians, three assistant physicians, two surgeons, a surgeon dentist, and a resident house physician. It is well known that these gentlemen have worked very hard, have spared no pains, and grudged no time in endeavouring to make the charity useful to the sick, and at the same time an excellent gynecic school for the profession. It is with extreme regret we have to notice the breaking up of this organization. The causes which have led to it may be thus briefly stated. The honorary medical staff having for some time observed the nursing in the institution to be inadequate and unsatisfactory, wrote a letter to the General Committee, requesting it to appoint a sub-committee, composed of an equal number of lay and medical members, to investigate the subject. The answer received was to the effect that such a course would be unconstitutional and could not be adopted. It is difficult to see how such a reply can be justified. The request of the staff was fair and reasonable. The sub-committee they wished to have appointed was not intended to be a legislative body. Its duties after the due investigation of the subject would have ceased when it had sent in its report to the Committee. The affairs of the hospital would have still remained in the same hands, and upon the receipt of the report the Committee would have been in a

position to conduct those affairs with greater accuracy and advantage. In the appointment of a sub-committee it is not unusual to select and associate with it experts who may have nothing whatever to do with the Society or Charity in connexion with which the investigation is being made. The Committee should, instead of snubbing them, have thankfully availed itself of the services proffered by the staff. Instead of doing this, however, it examined the nurses, and arrived at the opinion that "the charges made had little or no foundation." We submit that the method adopted by the Committee in determining the accuracy of the charges was utterly inadequate. Those most competent to give evidence were quite ignored. Were a court-martial constituted to inquire into an alleged lack of discipline among the privates of a regiment, would no evidence be taken from the officers of that regiment? The answer of the Committee was unwise and discourteous. It was wantonly throwing a torch amidst material which it knew to be already in a highly combustible condition. The staff, naturally much irritated by the rebuff, contented themselves with sending in a protest and throwing the responsibility of the ineffective nursing upon the Committee. It in return asked for evidence of the unsatisfactory nursing. To this the staff replied that they did not consider it incumbent upon them to spend more time in endeavouring to convince the Committee of the truth of their statements; and this reply the Committee called subordinating the interests of the charity and the welfare of the patients to personal considerations. To this imputation six of the staff returned an indignant repudiation of any such conduct, and a request that no time might be lost in appointing their successors. It has still to be stated that these resignations were made not entirely upon the nursing question. There was another source of disagreement, the Committee having determined to alter the bye-laws relating to medical officers in such a way as to make them apply for re-election every year instead of biennially, and giving as a reason that in case of one of the staff proving ineligible for re-election, the sooner his term of office terminated the better. Upon this question

resignation was threatened, and, in consequence, the obnoxious bye-law was rescinded as far as the existing holders of office were concerned. This concession, however, did not satisfy the majority of the staff, and their resignations must now be looked upon as final and irrevocable. We cannot congratulate the Committee upon the part it has taken in this matter. Its actions show the want of a firm, calm, master mind, able to control and carry high above all petty thought the business of its meetings. Its letters appear to be the work of two hands, one conceding and conciliatory, and one very much the reverse. Had the former been sole possessor of the pen, we cannot help thinking that this deplorable disorganization would never have occurred. The principle of government of the Hospital demands reconstruction. It should be more representative and less oligarchical. The medical staff should be partly or wholly ex-officio members of the General Committee, and this Committee should be elected by the Governors. Whether reforms be effected or no, for some time at least the Hospital must in a professional point of view remain seriously crippled. Experience such as the seceding gentlemen possess is not to be obtained in a few weeks, and even should other medical men be induced to fill the vacancies now existing, a considerable period must elapse before they can hope to do with equal efficiency the work of those who with so much perseverance and industry have made themselves masters of the special medical practice of the Hospital.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, April 1st, 1874.

E. J. TILT, M.D., *President, in the Chair.*

Five-and-a-half Months' Fetus.

Dr. EDIS exhibited for Dr. Geo. F. B. Willing of Great Waking, a fetus presumed to be only five months and ten days, dating from the last catamenial period. Premature labour resulted from

a fall a week previously. "Immediately the child was born it cried so loudly that it was heard distinctly downstairs, and continued at intervals to cry as loudly as a full grown infant. It was fed by a spoon with gruel, which it took without any trouble, but it could never be got warm, indeed it was almost stone cold; it passed meconium but no urine. The eyelids were perfectly closed; its weight was just $1\frac{1}{4}$ lbs., and length eleven inches. It lived exactly forty-four hours."

Dr. WILLING stated that in all his practice, extending over twenty-five years, although he had attended between 2000 and 3000 cases, he had never met with a similar instance.

Dr. BARNES alluded to his previous researches, where on examining the lungs, although the children had cried, the lungs sank in water, the air cells were not properly developed, and the children were not viable. A child may have potential life but must breathe to be alive.

Dr. HEYWOOD SMITH referred to a case similar to the one narrated occurring in a patient at Soho, where premature labour had been induced on account of cancer of the uterus.

Dr. WYNN WILLIAMS related an instance occurring in his practice, where an infant of about five months gestation had cried after birth, and then died shortly afterwards, in which case he had given a certificate of stillbirth, regarding it as non-viable.

Dr. SAVAGE doubted if a child could cry without breathing.

Dr. PLAYFAIR thought there must be air to produce a cry. He alluded to the case of Mungo Park the celebrated traveller, who had craniotomy performed on him at the time of his birth, but yet lived for many years.

Dr. COOPER ROSE remarked that a simple effort at respiration resulting in a sound resembling a cry could hardly be accepted as evidence of a living child, and he instanced a case of craniotomy occurring in his presence, where the brain was utterly destroyed, and yet an effort to cry was made after birth in consequence of the medulla oblongata not having been disorganized. In such a case no one would certify to the birth of a living infant.

Dr. ROUTH said that the specimen was one of interest chiefly as bearing on the question of viability, but he could not doubt that if a child had cried lustily, it must have lived, and he could not agree with Dr. Williams that it should be returned as stillborn to save the expense of a funeral. It might not be viable but it was alive, and by English law that was sufficient to prove right of inheritance. Indeed, he believed there was a case in law in which a child moved distinctly after birth, yet showed no other signs of life, and yet was adjudged alive, and the father became consequently seized by right of inheritance of considerable property. The Society might remember a case he had brought forward of a child only five and a half months advanced, which had lived eighteen days, and then died of atrophy. It appeared to him (Dr. Routh) although, as in this case, viability was impossible if a child only lived a minute, it could

not be returned as stillborn, it was only a question of degree after all. It would be interesting if a committee could report on this case and ascertain the condition of the lungs as alluded to by Dr. Barnes, as well as the exact age of the child.

The PRESIDENT suggested that Dr. Routh and Dr. Savage should examine and report upon it.

Mr. STEWART exhibited a *night-dress* designed at Dr. Barnes's suggestion for ladies during their lying-in where frequent changes are necessary without raising the patient. It was entirely open at the back and closed in the front, excepting apertures at each breast. The patient being on her back both sleeves are drawn on the sides, being then tucked under without moving her, except on either side, to allow of the dress being buttoned behind. Messrs. Burden and Keer, of 51, Conduit Street, were the makers.

Mr. STEWART also showed a *legging for varicose veins*, substituting a rigid material for the elastic; it was cool and washable and exerted uniform pressure.

Mr. THOMAS LIDDARD exhibited an *inhaler for chloroform* alone or in combination with alcohol or ether. It is cylindrical in shape, and divided into two chambers by means of a revolving band, which opens or closes the holes admitting air to the chambers. The proportion of chloroform respired by the patient can be estimated and regulated. In midwifery by first setting it to the required strength it can be safely entrusted to a nurse.

Dr. WILTSHIRE showed some *protected perforators* which he had devised. They are modifications of Oldham's and Simpson's perforators, each being furnished with a guard or sheath completely covering the point and blade of the instrument. So protected it could be introduced into and withdrawn from the vagina without the slightest risk of injury to the maternal parts, the guard being withdrawn only when the fetal head was reached, and after perforation being restored before withdrawal so as completely to obviate the possibility of injury to the mother. The instruments were quite powerful enough, though considerably lighter than the unprotected perforators now in use, and they could readily be cleaned, the guard being moveable.

Dr. HEYWOOD SMITH spoke of the advantage of the point being curved.

Adjourned Discussion on Dr. Playfair's Paper on Puerperal Thrombosis.

A short abstract was first read. The term thrombosis was applied to blood coagula formed at the point where they were found; embolism, to travelled blood clots impacted in a distant vessel. Every case of embolism therefore necessarily implied an antecedent thrombosis; phlegmasia dolens he regarded as only one of the local manifestations of puerperal thrombosis. As regards the pathology he said, that although there was obviously something beyond mere obstruction

of the vessels requisite to account for the peculiar form of swelling, yet that *that* was the principal and primary morbid state. He then alluded to the conditions favouring the coagulation of the blood in general, showing that these were all present to a remarkable degree in the puerperal state. He believed in the spontaneous origin of pulmonary thrombosis; in these cases death generally ensued before the fourteenth day, whereas in true embolism, death occurred at a remote period after delivery. The history and symptoms were then considered, as also the possibility of pulmonary obstruction occurring without proving fatal, several illustrative cases being given. The existence of a blowing murmur over the site of the pulmonary artery was insisted on. The mode of death was next considered; Virchow attributing it to syncope; Pancoast to cerebral anemia; Paget to an altogether peculiar condition, in some respects resembling anemia, in others syncope; Dr. Playfair endeavouring to support Berlini's views that it was referable to apnea. The post-mortem appearances and treatment were also given.

The PRESIDENT referred briefly to previous speakers' remarks, and cited the clinical history of a case given in Dr. Fordyce Barker's work on puerperal diseases.

Dr. SAVAGE said he had been an attentive listener to Dr. Playfair's paper, but had failed to discover anything in it which had not been already discussed and recorded. He should regret having moved for the adjournment if the discussion must be limited to puerperal phenomena. The subject was a wide one, and could not, with profit, be partially entertained.

Thrombosis, embolism, and Virchow were of course inseparable, but in the present communication he (Dr. Savage) thought the germ of Virchow's doctrine was altogether omitted. Emboli, Virchow says, except under special circumstances, do not come from the primary thrombus, because it entirely stops the blood stream; but should it project, as it often does, into a larger vein, of which it is a branch, the blood stream through the latter rapidly deposits upon it a succession of thrombus layers; from this secondary thrombus, the emboli particles are derived; they are in fact carried on by the blood stream to the right heart, and so on to the pulmonary artery and its primary branches with the usual now well known consequences. Dr. Playfair, however, is in antagonism with Virchow. He has after much research traced out twenty-five cases of pulmonary embolism, ten of which were not peripheral, but he omits all mention of the multitude of Virchow's cases proving the prevalence of this source of the disorder. In the year 1855-6, Virchow, owing to a puerperal epidemic, which lasted quite a year and a half, had under his immediate notice a multitude of fatal cases; in every one of these attended by pulmonary embolic complications, he found pelvic venous thrombus, more or less. Moreover, the character of the embolic particles in the pulmonary artery always corresponded *exactly* with that of the pelvic thrombus. By way of crucial test,

particles of brain and other substances were introduced into the jugular veins. The same substances composed the emboli subsequently found in the pulmonary arteries.

"A secondary thrombus as large as the thumb may be derived," says Virchow, "from a primary thrombus in a vein no larger than a knitting needle. Dr. Playfair's ten exceptions may after all have been peripheral, with the primary thrombus overlooked. In a recent railway accident the subject of the injury died rather suddenly forty-eight hours afterwards. A piece of crushed liver was found blocking up the pulmonary artery, and equally it was possible that the secondary thrombus might get loose, and pass bodily up the vena cava.

The peripheral production of pulmonic emboli need not be a slow process, as stated in the paper; an idea that it must be slow seems at the root of Dr. Playfair's chief difficulties, assuming that his cases were really thrombic, a conclusion by no means well warranted, and not at all in accordance with the necessary import of dyspnea in the eyes of the experienced practitioner; but Virchow does not assert that pulmonary embolism must have a peripheral origin; any of the few minor cardiac veins opening into the right auricle may be the seat of the primary thrombus, and give rise to a large secondary thrombus within the auricle, nor does the doctrine exclude primary heart thromboses, such as have been recognised from the time of Dioscorides, and for the last half century distinguished in text books as post-mortem in articulo and ante-mortem thrombi, the latter agreeing with the false polypi of Laennec.

Dr. Playfair considers phlegmasia dolens as "correlated," that is, it comes under the thrombic class of affections. This was precisely the view of it taken by Davis in 1822, and more emphatically established by Robert Lee some years after. That pathology of it has stood its ground ever since. Dr. Playfair has omitted septic and non-septic uterine venous thromboses from the "correlation." In a paper of this length some notice might be expected to be taken as to the rarity of pulmonic complication with phlegmasia dolens, the frequency of it in the worst forms of septic uterine thrombus, and the liability to ordinary pulmonic embolism in non-septic uterine thrombus. Another point, not yet perhaps entirely cleared up, is the invariable congestion of the pulmonary arteries and capillaries on the distal side of the embolic plug or plugs. Is Dr. Playfair satisfied with Ludwig's explanation?

Dr. MADGE observed that although he had attended 3000 cases he had never met with a case of thrombosis. He thought the analogy between phlegmasia dolens and thrombus rather a forced one.

Dr. RICHARDSON, who had been invited by the President to take part in the discussion, commenced by expressing his thanks for the friendly and able manner in which Dr. Routh had mentioned him and his early labours at the previous meeting. He then proceeded to vindicate the English school of medicine for the advancement it has made in the knowledge of this subject of separation of fibrine in

the body during life. The study was as essentially English as was the discovery of the circulation of the blood, of which indeed this was but a corollary. This position was briefly but forcibly maintained by reference to the different authors who, commencing with William Gould in 1684, had continued up to the present day. Referring to his own observations, which were first brought before the Medical Society of London in the session of 1850-1, and which had been followed up to the present time, Dr. Richardson described from his experience the conditions that lead to separation of fibrine within the circulatory channels during life, especially the two conditions of cachectic and acute pyrexia. The physical qualities of the fibrinous separation varied in respect to the amount of water from 3 to 30 per cent.

The cause of the separation of the fibrine was noticed as a disturbance in the relations which naturally subsist between the fibrine and the water of the blood, a disturbance that may be excited by increase of water and by increment of heat in the blood. Whatever leads to these two conditions favours the process of separation, and when in addition there is obstruction to the due course of the blood, so that there is friction of blood at some particular point, the separation is all but inevitable.

The action of an organic or septic poison may produce conditions that lead to separation, but the same conditions as Dr. Richardson had shown experimentally in 1854, may be induced by other causes and with the same secondary results—viz., the separation of fibrine.

From the author's experience of cases of this in the human subject, he estimated that the separation occurred on the venous side of the circulation in not less than six cases to one on the arterial.

After describing the different forms of separated fibrine found in the venous system, in the heart, and in the pulmonary artery—viz., the solid, the spiral, and the hollow cylinder, the layer or false lining, the irregular mass, loose or moulded to the part from which it was taken, Dr. Richardson maintained still the view he has held all through the course of his labours—that, as a rule, the separation takes place on the venous side at the spot where it is found.

In the numerous inspections he had made of fibrine separated in the pulmonary artery after death by surgical fever, pneumonia, the puerperal state, and various other forms of death, he had not in a single instance been able to come to the conclusion that the fibrinous mass had been carried from a distant part of the venous circuit; on the contrary, he had always discovered the clearest evidence of formation *in situ*. He had found in some instances separations in other parts of the venous circuit. He had seen such a case within the last few weeks, but these separations were coincidental; they too were formed at the places where they were found, and they indicated only a general condition of blood favourable to separation.

On the question of diagnosis of separations of fibrine in the pulmonary artery and in the venous circuit, Dr. R. entered into

careful detail. He first defined a class of cases in which the symptoms of separation were simulated, and afterwards the symptoms, general and physical, that lead to an absolute diagnosis. The mode in which cases terminate when the obstructing fibrine is on the right side of the heart and in the pulmonary artery is varied—unfortunately it is almost always at once fatal—but he had records of other modes of termination; one in which the obstruction produced edema of the lower extremities, and a lingering death; others in which the separated substance was retained in the heart for a long period of time, killing at last suddenly by obstruction to the course of the blood. Lastly, in three cases he had seen what he believed was actual recovery by the resolution of the separated fibrine. In concluding his observations Dr. R. dwelt on the subject of treatment. Opium, excess of wine or brandy, and movement of the body, he held to be injurious and even dangerous methods of treatment. The plan he pursued was to maintain perfect rest of the body in the recumbent position, to reduce the temperature by iced drinks, and sustain by milk and soda water. Medicinally he administers ammonia in ice water until it suspends the coagulability of the blood, and he keeps this action up by large and frequently repeated doses. From 15 to 20 minims of the strong solution of ammonia, or better still, the strong alcoholic solution of ammonia, may thus be administered in the course of every two hours in divided quantities, and the effect may be sustained until the blood corpuscles begin to show signs of solution. The details of two severe cases thus successfully treated were related, and those of a third case, in which, although death took place from secondary lesion, the effect of the alkali in resolving the fibrine was well marked. It was not assumed by the author that under this treatment a majority of affected persons would recover, but the practice was simple and sound; and in every clear case, if commenced early enough, and persisted in firmly, would at least save some from what is otherwise inevitable death. For this reason he pressed it earnestly on the attention of the Society.

Dr. PLAYFAIR said that any reply to the observations that had been made seemed unnecessary. Dr. Savage had found fault with his paper as treating of a subject which he seemed to think was exhausted. So far was this from being the case, that there was not a single English text book on midwifery in which it was even alluded to, not even in the recent and admirable work of Dr. Leishman, published only a few months ago. Indeed, the present paper was the first attempt to collect together the information which existed in regard to thrombosis and embolism in reference to the puerperal state. It should be remembered that Virchow's writings referred to the subject in general, not to its obstetric relations, and when the paper was written, Dr. Fordyce Barker's work had not appeared. He (Dr. P.) contested Virchow's view as to the invariable embolic origin of pulmonary and cardiac clots, and to this Dr. Savage took exception. He was gratified to find, however, that he had

Dr. Richardson's high authority in support of his view. There was little in Dr. R.'s remarks that called for comment: they contained nothing in opposition to what was stated in his paper. Dr. R. objected to the use of the words thrombosis and embolism as barbarous, but he proposed no substitute for them, and as some distinctive appellation was necessary, they might safely be used until some better names were invented. They at any rate had the advantage of distinguishing the two classes of cases. With regard to the ammonia in the blood maintaining the fibrine in solution, Dr. R.'s remarks showed that he had abandoned the theory. The administration of ammonia on the hypothesis that it would aid the solution of the fibrine already deposited, that was an entirely different thing, and on that ground the remedy might be well worthy of trial in future cases.

THE EDINBURGH OBSTETRICAL SOCIETY.

Meeting, February 25th, 1874.

Dr. J. MATTHEWS DUNCAN, *President, in the Chair.*

On the Size of Aperture necessary for the Passage of the Placenta and for the Passage of the Accoucheur's Hand.

By J. MATTHEWS DUNCAN, M.D.

At a late meeting of the Society I raised the question of the dimensions of an aperture such as the os uteri, when just capable of transmitting the accoucheur's hand, and its dimensions when just or earliest capable of transmitting the placenta. These questions had evident bearings upon the methods of treatment of *placenta prævia*, which was the subject under discussion; and, as their solution was not known to myself or to the members present, I resolved to attempt to settle them.

The first of these two questions which I shall consider is the smallest aperture capable of transmitting a placenta uninjured. It is evident that the aperture will be circular, or nearly so, and in the experiments I used a circular aperture. It is also evident that, with a view to exactness in the experiments, and with a view also to the practical utility of them, the placenta should be brought through uninjured. Indeed, injury or laceration would make little difference in the results, unless the organ were greatly torn; for, supposing the organ to be circular and of equal thickness in all its parts, laceration would not facilitate transmission through a small aperture, unless the laceration was such as to remove from the aperture a part of placenta which would otherwise be there while the thickest part or centre of the placenta was passing.

Mr. A. C. Harris, one of the resident physicians of the Royal Maternity Hospital, kindly undertook to perform for me the following experiments, and it is the results which he obtained that I now give.

TABLE of Experiments showing the size of Aperture through which the Placenta can be Extracted with more or less difficulty.

No. of Experiment.	Weight of Placenta.	Diameter of Placenta.	Thickness of Placenta.	Diameter in Inches of Aperture of Transmission.					
				1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$
1.	1 lb. 1 oz.	7 inches.	$\frac{3}{4}$ inch.	—	<i>e</i>	<i>d</i>	<i>a</i>	—	—
2.	1 " 5 "	6 $\frac{1}{2}$ "	1 " "	—	—	—	<i>d</i>	<i>d</i>	<i>a</i>
3.	1 " 4 "	7 " "	$\frac{3}{4}$ " "	—	<i>e</i>	<i>c</i>	<i>b</i>	—	—
4.	1 " 1 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	$\frac{5}{8}$ " "	—	<i>e</i>	<i>c</i>	<i>a</i>	—	—
5.	1 " 2 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	1 " "	—	—	<i>c</i>	<i>b</i>	<i>b</i>	<i>a</i>
6.	1 " 2 "	6 $\frac{1}{2}$ "	$\frac{1}{2}$ " "	—	—	<i>c</i>	<i>b</i>	<i>b</i>	<i>a</i>
7.	1 " 5 "	8 " "	$\frac{1}{2}$ " "	—	—	<i>d</i>	<i>b</i>	<i>b</i>	<i>a</i>
8.	1 " 6 "	6 $\frac{1}{2}$ "	1 $\frac{1}{8}$ " "	—	—	—	<i>d</i>	<i>b</i>	<i>a</i>
9.	1 " 4 "	7 " "	1 " "	—	—	<i>d</i>	<i>c</i>	<i>b</i>	<i>a</i>
10.	1 " 4 "	6 $\frac{1}{2}$ "	1 " "	—	—	—	<i>d</i>	<i>c</i>	<i>a</i>
11.	1 " 6 $\frac{1}{2}$ "	7 " "	1 " "	—	—	<i>d</i>	<i>c</i>	<i>b</i>	<i>a</i>
12.	1 " 1 $\frac{1}{2}$ "	7 " "	$\frac{3}{4}$ " "	—	—	<i>c</i>	<i>b</i>	<i>b</i>	<i>a</i>
13.	1 " 6 "	7 " "	$\frac{1}{2}$ " "	—	—	<i>c</i>	<i>b</i>	<i>b</i>	<i>a</i>
14.	14 "	6 "	$\frac{1}{4}$ " "	<i>e</i>	<i>c</i>	<i>b</i>	<i>a</i>	—	—

In this Table—*a*=Quite easily. Its own weight sufficient to pass it.

b=Easily. Placenta requiring careful folding.

c=With slight difficulty. Requiring folding and slight pushing.

d=Difficulty. Requiring folding, pushing, and pulling.

e=Very difficulty. Requiring, in addition, time and nice manipulation.

The Table shows that an aperture of fully two inches in diameter is required for the transmission of the uninjured mature placenta. Of course, in a much lacerated state, it may be brought through an aperture of smaller dimensions.

I do not remember any statement of such results as I have just given with reference to the placenta, nor do I know of any similar statement regarding the transmission of the hand. But this latter point has been described, for practical purposes, in a valuable practical way, by many authors, and of this kind of description I shall give examples. It is evident that all of them are purely practical statements, and do not in the least solve the important question which is raised in this short paper.

Burns ("Principles of Midwifery," &c., 10th edition, p. 370) says—"We may safely deliver whenever the hand can be introduced without much force." Collins ("Practical Treatise on Midwifery," p. 94) says—"The earliest moment that the mouth of the womb will, by gentle efforts, permit the introduction of the hand." Rigby ("System of Midwifery," p. 262) says—"When once the os uteri is sufficiently dilated to admit the hand." Ramsbotham ("Obstetric Medicine and Surgery," 5th edition, p. 369) says—"When it (the os uteri) has acquired the diameter of half-a-crown (1 $\frac{1}{4}$ in. diam.), or a

crown ($1\frac{1}{2}$ in. diam.), it will generally suffer itself to be dilated to such an extent as will admit the hand without injury to its structure. . . . (p. 370). As soon as the mouth of the womb is sufficiently open to admit the thumb and the four fingers as far as their second joint, we may expect that it will offer but a slight impediment to the passage of the whole hand." Murphy ("Lectures on the Principles and Practice of Midwifery," 2nd edit., p. 457) says—"If the os uteri be one-half, or even one-third, dilated, you may deliver."

All of these statements, and I might quote more of them, merely imply that you should pass your hand if you can, or if you dare. The terms of caution have no definite meaning, and are of little value, being interpreted in a different way by different minds. Now, what I desire to make out is the answer to the question—How large must the os uteri be to transmit the accoucheur's hand? or, to what extent must it be expanded for this purpose? The authors just quoted deal with and attempt to describe that stage of dilatation at which further dilatation to the necessary amount for passing the hand may be expected. Their determinations are almost worthless, as already said; for it is very difficult to estimate the size of the os uteri, and more depends on its softness and dilatability than on its size. I have delivered, passing the hand and turning, when the os at the commencement of the operation had undergone no active dilatation. The operation was easy, and without any injury to the cervix that I could ascertain, it being soft and dilatable.

The os, supposed to be circular, must have a diameter of from $2\frac{1}{2}$ to 3 inches in order to transmit the hand of the accoucheur. My own hand can be forced through a round aperture of $2\frac{1}{2}$ inches in diameter.

In conclusion, I offer a single remark, having a practical bearing, that almost naturally follows the above measurements.

The placenta can be got away without disruption through an os of 2 inches in diameter or a little more, and the hand can be passed through an os of $2\frac{1}{2}$ inches in diameter or a little more. The placenta is soft and lacerable, and can exert little force in distending the os. The hand is hard and firm, and can be used to dilate with considerable force. The os uteri is, in cases of *placenta prævia*, very rarely rigid and undilatable. It may, therefore, be safely asserted that, in the very great majority of cases of *placenta prævia*, the hand may be passed into the uterus, if the placenta can be extracted from it in a satisfactory manner without disruption.

This is not the place to enter on evident further applications of this result, in unfavourably criticising the treatment of *placenta prævia* by separation and removal of the organ.

Dr. CHARLES BELL thought Dr. Duncan's paper interesting, and the subject an important one. He had sometimes found it easier to get the hand in than out in malformed pelves. His left hand was smaller than his right, but he required an aperture of from $2\frac{1}{2}$ to 3

inches. The hand will enter more readily if the opening be elliptical. Dr. Bell illustrated this by several cards he had made with such openings in them.

PROFESSOR SIMPSON said the shape of the opening was of great importance. The comparison betwixt a circular opening in cardboard and the dilatable os, which could be made to yield transversely and otherwise, was not a proper one ; so Dr. Bell's elliptical opening was required to complete the observation. In connexion with this he must still express his opinion that if the os were dilated sufficiently to enable the hand to enter and separate the placenta, the latter could be removed without injury to the os.

Dr. DICKSON said his hand could go through a circular opening of $2\frac{1}{2}$ inches.

Dr. CONNELL said that the cardboard proved little, as it was unyielding ; in fact, the comparison of the resistant board with the dilatable os was a mere fiction.

THE DUBLIN OBSTETRICAL SOCIETY.

Meeting, March 14th, 1874.

LOMBE ATTHILL, M.D., *Vice-President, in the Chair.*

On the Use of the Perchloride of Iron in Post-partum Hemorrhage.

By LOMBE ATTHILL, M.D.

The discussion which ensued on the publication of my paper on "The Anticipation of Post-partum Hemorrhage," in the *British Medical Journal* for November 1st, 1873, has led to the appearance of numerous communications in the columns of that journal, as well as in those of the OBSTETRICAL JOURNAL, on the proper method of treating post-partum hemorrhage, more especially with reference to the advisability, or otherwise, of injecting a solution of the perchloride of iron into the uterus in such cases. This question is one of great importance, and I deem no apology necessary for bringing it before the Society to-night.

It is much to be regretted that the discussion which has hitherto taken place on this point has not been carried on with greater calmness. The question to be decided is one to which too great weight can hardly be attached. If the perchloride of iron be a remedy as safe as it is avowedly efficacious, its use should, without doubt, be encouraged. If, on the other hand, its employment be fraught with such danger as is maintained by some, we should, with equal distinctness, reprobate its use under almost any circumstances. This being the case, it is a matter of deep regret that some of the writers who have taken part in the discussion—not yet concluded—should allow themselves to be drawn into the grave fault of substituting assertions for facts, uncourteous denials for proofs, and to forget them-

selves so far as to indulge in pungent sentences, which, however clever as retorts, savour more of personal antipathy than of scientific argument. Such papers, however agreeable to read, fail utterly in deciding in any way the value of the plan of treatment under consideration; that can be effected alone by carefully recording the cases in which the treatment has been tried, and the results. Such records should state the condition of the patient at the time when the styptic was injected, its immediate effect, and the termination of the case. The points to be decided, in my opinion, are three—

1st. Do cases of post-partum hemorrhage occur which we have reason to believe would terminate fatally, or at least in which life is seriously endangered, notwithstanding the judicious use of the remedies ordinarily employed for the arrest of hemorrhage?

2nd. Is the injection of a solution of the perchloride of iron of itself a dangerous remedy? and

3rd. If so, are the dangers likely to follow its use such as to outweigh its obvious advantages as an agent capable of effecting with almost certainty, the further loss of blood?

In order to aid in some degree in the elucidation of these most important questions, I shall detail the particulars of the cases in which the solution of the perchloride of iron has been injected into the uterus for the arrest of post-partum hemorrhage in my private practice, hoping that my doing so may induce other members of the Society to bring forward the facts connected with similar cases, and that as a result, some practical inferences may be deduced on which sound rules for future practice may be based.

This I will assume as proved, that the perchloride of iron applied to the interior of the womb is an efficient hemostatic. To my judgment this much is conclusively proved.

I think the first of the three questions I have put down for discussion will be answered in the affirmative all but unanimously. Dr. Barnes and Dr. Gream state that they have “never seen a woman die from post-partum hemorrhage when under their own care from first to last.” I regret to say my practice has not been equally successful. I have lost at least one patient of post-partum hemorrhage, whose bed-side I never left from the termination of the first stage of labour till death ensued, and whose labour, up to the occurrence of the hemorrhage, which did not set in till after the expulsion of the placenta, was in all respects easy and natural. In her case I exhausted all the ordinary methods employed for the arrest of hemorrhage, but my patient died before my eyes. I admit, however, that I did not rely on the use of brandy to the extent recommended by Dr. Gream. I gave it freely, both by the mouth and by the rectum. No doubt Dr. Gream would say the fatal result followed simply because “I did not give enough.” But if I did not give it by the half-pint, I gave it by the ounce, and the large doses of alcohol I did give were nearly useless, because they were rejected as fast as swal-

lowed. Moreover, I regret to say, I did not inject the perchloride of iron. It was the first case of severe hemorrhage which occurred in my practice after that method had been brought under my notice by Dr. Barnes ; and, like many of my brethren now-a-days, I feared to use this, to me, new and powerful remedy. I now firmly believe that to this timidity the death of my patient—a young wife and a young mother—was due. I feel that she might still be alive if only I had used a remedy I knew of, but had not courage to employ. This, however, I have to compensate me, that though since then I have stood beside the bed of more than one whose life seemed to me in greater peril than hers, to whom I have just alluded, no such scene as that I then witnessed followed, nor do I believe it ever will again. The lesson I that day learned taught me the utter inutility of the “ordinary means at our command” for the arrest of post-partum hemorrhage in a certain class of cases.

I shall now lay before the Society the particulars of the following five cases which have occurred in private practice. I should add that I have seen the perchloride of iron used in other cases, but as they were not those of patients directly under my own care, I do not refer at present to them, but shall merely premise that, so far as I am aware, no unfavourable symptom subsequently occurred in any of them.

CASE I.—This was, I believe, the first occasion in which the perchloride of iron was used in Ireland. The patient was the wife of a medical man, who, never robust, suffered much from sickness of the stomach during her pregnancies. She was an example of that numerous class of women whose health is often permanently injured from the habit, frequently I believe acquired, of taking an altogether insufficient quantity of food. Her husband assured me that during the whole of her married life, the quantity of food consumed by her day by day was so small that, to use his own words, “she ate nothing.” During this her fourth pregnancy her appetite, always small and capricious, was further impaired by constant nausea and frequent vomiting. Some hemorrhage occurred on the morning of the 11th July, 1869. She was then in the eighth month of her pregnancy, but the loss was so slight she did not think it needful to send for me, especially as there were not any pains present. Her nurse-tender, however, calling by chance, she kept her in the house : after a time sharp pains set in, and the labour terminated rapidly in the birth of a dead child. Slight hemorrhage continued during the progress of the labour, which terminated under the sole charge of the nurse-tender. The placenta was expelled almost immediately on the birth of the child. The hemorrhage, however, continued, and the husband, becoming alarmed, sent for me. I was from home, and the messenger proceeded to Dr. Kidd’s. He has given me the following note of the case :—“The lady lived some distance out of Dublin. Her husband, a medical man, wrote to you saying she had been delivered some hours, and

was very weak from the effects of post-partum hemorrhage, which was still going on. As you were from home, the note was sent to me, and I at once visited her, taking with me a syringe and a solution of perchloride of iron, with which I had for some time been provided, in consequence of reading Dr. Barnes's papers on the use of the perchloride. When I arrived I found the lady in a state of extreme prostration; the surface was cold; she was almost pulseless, throwing her arms about, and begging to be allowed to sit up and get air. A skilful nurse was holding the uterus. For some time after my arrival I took charge of the uterus myself, and found, as the nurse had said, that the moment the pressure was removed the uterus relaxed and the bleeding returned. It was evident she could not bear the loss of more blood, and that there was no time to be lost, so I proceeded to inject the solution of the perchloride of iron as directed by Barnes; this at once checked the bleeding; the uterus contracted and remained firm. I applied a bandage, gave brandy and opium, got hot jars and flannels to the surface, and watched her closely till reaction was fully established; by this time you had arrived, and took further charge of the case."

The condition of the patient when I saw her, fully confirmed the account given by Dr. Kidd; reaction was established, but the patient was still in a most precarious condition. She was greatly exhausted, the exhaustion being kept up by incessant vomiting, which had set in immediately after the birth of the child, and which, notwithstanding the arrest of the hemorrhage, continued with unabated violence. Brandy, opium, ice—all were tried, and all failed to check this at first distressing but now alarming symptom. Tinct. opii injected into the rectum was equally inefficacious; at last I thought of trying the hypodermic injection of morphia—a remedy I had at that time but little experience of. I injected half a grain of the acetate of morphia; this had an instantaneous effect. She did not vomit once afterwards, and from that moment improved and made a good recovery. I have since then attended this lady in two confinements, both of which were perfectly normal.

As I have already mentioned, this was the first occasion in which the perchloride was used in Ireland for the arrest of post partum hemorrhage, and I firmly believe that to Dr. Kidd's promptitude in using it this patient owes her life.

CASE II.—Mrs. C., a pale delicate-looking lady, aged twenty-three, with an anemic murmur, audible at the base of the heart, gave birth to her second child on the 16th October, 1869, after a short labour of but four hours' duration. The placenta was expelled in about fifteen minutes after the birth of the child. During this interval I kept my hand constantly on the fundus of the uterus. It contracted firmly, and I applied a binder. Shortly after a small stream of blood was observed to trickle down from the vagina. On loosening the binder, I found that the uterus had become relaxed. The application

of my hand caused it to contract immediately, and some clots were expelled. This alternate contraction and subsequent relaxation of the uterus, so often seen in the case of women with relaxed muscular tissue, was repeated several times. The total quantity of blood lost was not large, but it told greatly on this delicate and fragile lady. Cold judiciously applied, ergot, friction, &c., failed to produce more than temporary contraction of the uterus. The fatal case of post-partum hemorrhage I have already alluded to was fresh in my memory; it had occurred in my own practice and in a very similar patient but a few months before. The successful result of the case just detailed had lessened, if it had not altogether removed, my dread of the action of the perchloride of iron. My patient was in a critical state—indeed, to one in her state of health, of great danger. I resolved to use the perchloride of iron, and accordingly injected about an ounce of the liquor of the perchloride of iron, B. P., diluted by the addition of three ounces of water, into the uterus. The effect was instantaneous—the uterus contracted much more firmly than before, and *did not again relax*. Not a drop of blood was subsequently lost. This lady recovered without a bad symptom, and has been confined twice since.

CASE III.—In July, 1870, I was requested to visit a lady, the wife of a medical man, who expected her first confinement in about a month's time. Her general health was very bad; she had suffered much during her pregnancy from sickness of the stomach, which, though it had now ceased, had reduced her strength greatly. She was unable to eat any solid food, her appetite, such as it was, being extremely bad and capricious. She was very large, and quite unable to take exercise. She suffered besides from severe pain in her back, and along the margin of the false ribs. Her complexion was sallow, and her aspect indicated much suffering. I felt anxious as to the result of her confinement. Labour set in during the night of the 1st August, 1870; the pains in the first stage, which occupied upwards of ten hours, were short, harassing, and inefficient; in the second stage they were equally inefficient. The head descended slowly into the pelvis, but did not advance further, and finally, after the lapse of fifteen hours from the commencement of the labour, I applied the forceps, and delivered her of a living child. Ergot had been previously given, but sickness of the stomach rendered it useless. Immediately after the birth of the child some hemorrhage occurred, and I removed the placenta by pressure. Its expulsion was followed by the most copious and alarming hemorrhage I ever witnessed. The blood gushed out in such a copious stream, that the bed was saturated and the floor deluged with it, in a shorter space of time than it has taken me to pen these lines. My hand all this time was on the uterus. In a few minutes life seemed extinct in this previously debilitated and exhausted woman. As rapidly as I could, and without having recourse to any of "the ordinary means," I injected some

ounces of a diluted solution of the perchloride of iron. It acted at once—the hemorrhage was arrested, and my patient slowly revived. On the third day she was wonderfully well, and continued so to improve till the tenth day. Then she had a rigor, the pulse rose rapidly to 160 in the minute, well-marked symptoms of peritonitis subsequently set in, and she died on the fifteenth day after delivery.

CASE IV.—Mrs. L., a delicate lady, whose health had been very bad during pregnancy, gave birth to her first child on the 9th Oct., 1871, after a labour of eighteen hours' duration, a living child. The second stage occupied two hours. The child presented with the feet. After the expulsion of the placenta hemorrhage set in, as in case No. II. Notwithstanding the use of "the ordinary means," the hemorrhage continued; the uterus would contract, but not firmly, and a constant stream of blood trickled from the vagina. The patient was greatly exhausted, and became very faint. I injected, as in case No. II., about four ounces of the solution of the perchloride of iron, in the proportion of two parts of water to one of the liquor. The uterus instantly contracted firmly, and no more blood was lost. This patient, considering her constitutional delicacy, made a good recovery, and became pregnant again early in last year. Her labour on this occasion forms—

CASE V.—Labour on this occasion set in soon after midnight on the 27th October, 1873. During the whole of her pregnancy her health had been so bad that I looked forward with much apprehension to her confinement. She suffered, from the very commencement of utero-gestation, from constant sickness of the stomach. This was not mere nausea, with occasional vomiting, but almost everything swallowed was rejected. She had besides the most absolute loathing for food. The tongue was also coated with a thick yellow fur. The bowels were alternately obstinately constipated or violently relaxed. She had, in addition, two severe attacks of illness—the one of inflammatory sore throat; the other of inflammation of the ear, terminating in abscess. For weeks at a time she was supported by means of enemata of beef-tea and brandy, and more than once during the course of her pregnancy I seriously considered the propriety of inducing premature labour. Labour set in soon after midnight on the 27th October. The first stage was very tedious, and occupied upwards of twenty hours. So utterly inefficient were the pains that I formed the opinion that the uterus opened by a process of mere relaxation, no appreciable pressure being brought to bear on it by the uterine contractions. As soon as the os uteri was fully dilated I ruptured the membranes, and commenced the administration of ergot—not with the view of hastening the labour, but of preventing the occurrence of post-partum hemorrhage. The drug was, however, vomited. The head did not enter the brim; it appeared simply to rest on it—the short, inefficient pains being altogether powerless to cause its advance.

I, therefore, applied the long forceps. This was effected with ease. I extracted very slowly; the operation occupied, on this account, nearly forty minutes. The pelvis was roomy and the child small; no difficulty, therefore, was experienced in extracting the child, which, though very feeble, ultimately lived. The uterus, somewhat to my surprise, contracted well. Mindful of the tendency to post-partum hemorrhage exhibited after her former labour, I had, before I applied the forceps, not only administered ergot in combination with strychnia, but had in readiness, in addition to cold water, &c., a vessel containing two ounces of the liquor of the perchloride of iron, diluted with four of water; but my precautions seemed needless. The placenta was in due time detached and expelled, with the aid of gentle pressure applied to the fundus. After its expulsion I still continued for some time to keep up pressure with my left hand on the uterus. As it continued firmly contracted, I then applied the binder, with pads under it, firmly. All seemed so well I thought I might soon with safety leave the patient, when, after the lapse of more than half an hour, she began again to vomit—a copious stream of blood instantly issued from the vagina, and before I could unpin the binder the uterus was so relaxed as to reach above the umbilicus. The pressure I applied seemed only to increase the flow of blood, without exciting any contraction. In five minutes my patient was almost pulseless. This seemed to my mind one of those desperate cases in which I dare not lose time by the employment of what I was satisfied in her case would prove to be inefficient remedies. I therefore at once injected about four ounces of the solution I had fortunately previously prepared. The hemorrhage was at once arrested, the uterus contracted, but so nearly had life been extinguished, that two hours elapsed before the pulse returned with any degree of firmness to the wrist, or that I dared to leave the bedside of this patient; and so great was the subsequent prostration, that for two days she lay in a state of semi-unconsciousness. She swallowed mechanically beef-tea, brandy, &c., when placed to her lips, but never spoke except when roused. The urine was drawn off with the catheter, the bowels did not move, there was not any attempt at the secretion of milk. Her condition, however, slowly improved, no bad symptoms occurred, and she regained in time her usual health. I understand that she is now (March, 1874) again pregnant.

The foregoing five cases occurred in my private practice, and I had an opportunity of judging not only of the previous state of health, but of tracing the subsequent history of each patient. I desire to comment on some points which appear to me of importance, and as calculated to guide us—first, as to the class of cases in which the injection of a styptic into the uterus for the arrest of post-partum hemorrhage is likely to be most useful; and secondly, as to its subsequent effects on the patient.

1st. It is noteworthy that the only cases which seemed in my practice to demand this treatment were women in a previously bad state

of health. Case No. I. was that of a lady who not only suffered from sickness to an excessive degree during pregnancy, but who for a long time previous to, and of course also during her pregnancy, consumed almost no food, and what she did take was of an improper character. No. II. was markedly anemic. No. III. was in such bad health as to cause much alarm to her friends on this account prior to labour. Cases Nos. IV. and V. were the same patient. She, too, was on both occasions in a very bad state of health—so bad, indeed, that the induction of premature labour seemed more than once demanded. In all it may be fairly assumed that the blood was in an abnormal condition, probably destitute of its proper proportion of fibrine. This seems specially likely to have been so in Case II., in which, though the uterus contracted fairly, the hemorrhage continued.

2nd. As to the results.—In three of the four patients pregnancy subsequently ensued ; this fact proves clearly that the injection of the perchloride of iron in no way injured the uterus.

In four of these five cases, notwithstanding previous bad health and the great loss of blood sustained at the time, no unpleasant symptoms of any kind subsequently presented themselves. In one case death ensued. Taking into account her previous ill-health and the acknowledged tendency which always exists to the occurrence of peritonitis after excessive losses of blood, it hardly seems a reasonable inference that in her case death was due to the effects of the injection of the styptic. The Society have, however, before them all the facts which I am possessed of, for no post-mortem examination was possible. My own opinion is that this patient would probably have died whether the perchloride had been injected or not. Pyemia, phlebitis, and peritonitis have, as is well known, carried off numbers of patients who have suffered from post-partum hemorrhage, long before the injection of a styptic for its arrest was proposed, the debility resulting from the loss favouring the occurrence of these forms of disease ; and in the case of the patient under consideration, the state of her health previous to labour aggravated the danger, to which all cases of hemorrhage are liable. But even were it proved that her death was the result of the use of the perchloride, a further question has yet to be decided—namely, this, believing as I did, and still do, that this patient would have died from hemorrhage, and that in a few minutes, was I justified in using an agent which alone, in my opinion, was capable of saving her life ? supposing it to be proved that in a certain proportion of cases the use of that remedy would be followed by fatal results.

This question seems to me to be identical with that which is involved in deciding on all capital operations, notoriously in that of ovariectomy, and that it must be decided on the same principles. I shall not, therefore, discuss it further.

For myself I have arrived at the following conclusions :—

1st. That cases of post-partum hemorrhage occur in which the injection of the perchloride of iron, or some similar styptic, is alone capable of arresting the hemorrhage.

2nd. That the injection of such styptic does not necessarily increase the tendency which exists in such cases to the occurrence of pyemia, septicemia, or peritonitis.

3rd. That this treatment is specially applicable to anemic patients.

4th. That while it should never be had recourse to unnecessarily, it should not, on the other hand, be delayed too long.

I may add that in using the solution of the perchloride of iron, I carry out in the main the directions given by Dr. Barnes. I have not, however, in any case injected more than six or eight ounces, sometimes as little as four ounces of the fluid. I also use it somewhat stronger than he does—namely, in the proportion of one part of the strong liquor, B.P., to two of water. The important point in using it is to take care that the end of the tube is passed up to the fundus of the uterus, and that the fluid be injected slowly. I should add that I have not met with any case in which the uterus did not immediately contract firmly on the perchloride being injected. I am inclined to attribute this to the fact that I had recourse to the remedy before the powers of the patient were so exhausted as to render the uterus incapable of responding to the stimulus.

Before concluding this paper, I desire to say a few words as to what are “the ordinary means” employed for the arrest of post-partum hemorrhage. They are the administration of ergot, pressure and friction on the fundus of the uterus, and the application of cold; these, with the addition of the free exhibition of brandy or other stimulant, may, I think, be considered the means ordinarily had recourse to by practitioners.

As to ergot, it is a most uncertain agent, and while most useful if administered some time before the occurrence of the hemorrhage, is, in my opinion, seldom of much value if given after it has set in. Ergot takes at least twenty minutes to act, and besides is often in these cases vomited. Injected hypodermically it is, I believe, capable of doing much good, but its irritating properties, when thus used, render this method of employing it not altogether unobjectionable. I am at the present time engaged in endeavouring to obtain an efficient and, at the same time, unirritating preparation of this drug for hypodermic injection. As yet I have been unable to obtain any definite results.

The value of pressure on the fundus, if it be judiciously applied, can hardly be over-estimated; but the most carefully applied pressure, or pressure combined with friction, will at times fail to check the flow—in spite of all, the bleeding will go on.

Cold, one of the most potent means at our command for stimulating the uterus to contract, is frequently useless—nay, more, often positively injurious in consequence of its being improperly used. To do good it must cause a shock. It must, therefore, be applied suddenly while the patient is warm. Its application should never be unduly prolonged, for if once the temperature of the body be so reduced that cold, no matter how applied, fail to produce reaction,

the uterus will not contract, and the hemorrhage will be in no way checked. Therefore, while I am not prepared to say that cold water should never be poured from a height on the patient, I decidedly object to such a practice, for it necessitates the exposure of a large surface of the body, and the saturating and therefore changing of the bedding. Injecting cold water into the rectum is generally a safe and often an efficient method of employing cold ; but, to be of use, it requires to be done before the patient has become exhausted. Injecting water into the uterus is, I believe, on the contrary, by no means a safe practice. The advocates of this practice tell us that "the injection (of cold water) should be continued till the fluid returns clear." This procedure is, in my opinion, far from being free from danger. I believe it to be quite as likely to be followed by serious consequences as the injection of the solution of the perchloride of iron, while it is far less efficacious. If had recourse to at all it should be done early, and the quantity injected should be but small. Cold water should never be injected into the uterus of a patient exhausted by excessive loss of blood.

Ice introduced into the uterus or rectum will, if the patient be not too much exhausted, cause the uterus to contract. But how seldom is it possible to obtain ice at the moment, and, if attainable at all, much time must generally elapse before it is at hand, and then it is in general too late to be of real good, for, as in the case of the injection of cold water, to be of use it should be used promptly. If it does not succeed at once, its further use can only be productive of mischief. It therefore cannot, for many reasons, be relied on as an efficient agent for the checking of post-partum hemorrhage.

Of the other means advocated for this purpose, and which cannot be classed among the "usual" ones, the introduction of the hand into the uterus is that which is most frequently advocated. There can be no doubt but that in some cases this treatment has proved efficacious. On the other hand, it certainly cannot be relied on. Thus, to quote reliable authority, Drs. Hardy and M'Clintock give the particulars of a case which proved fatal from the loss of blood, and in which the hand had been introduced into the uterus. The recorded cases in which this plan has been adopted are so few, and the termination of the case, even when the hemorrhage has been checked, so uncertain, that no positive inference as to its value can be drawn. But for myself, I have always looked on the method as one not free from danger. The introduction of the hand into the uterus is far from being a perfectly harmless operation. In this opinion I am borne out by the fact recorded by Drs. Hardy and M'Clintock, that Dr. Charles Johnson, the then Master of the Lying-in Hospital, looked on this practice with great disfavour, and Dr. Johnson's opinion carries great weight, at least with such of us as remember that able practitioner and accurate observer.

My object in making these concluding remarks has simply been to show that the means at our disposal for the arrest of post-partum

hemorrhage are far from being reliable, and of what importance it is to add to their number one so powerful as the injection of a styptic solution.

Post-Partum Hemorrhage, treated by the Application of the Solid Perchloride of Iron to the Interior of the Uterus.

By A. HILL RINGLAND, A.B. T.C.D.

A great question which of late has been occupying the minds of obstetricians in this and other countries is, whether the perchloride of iron applied to the interior of the uterus, as a remedial agent for post-partum hemorrhage, is advisable or not? It is needless for me to enlarge on the vital importance of such an inquiry, for on the decision arrived at, whether it be in the affirmative or negative, may depend, not merely the safety of many of our patients, but also the success or failure of our reputation as practitioners; although the latter is, indeed, of inferior importance.

If there be no subject within the extended fields of pathology and histology, upon whose precise nature the advancement of medical knowledge has thrown more light than hemorrhage, there are assuredly no organs in the body that have derived more benefit from this circumstance than those subservient to reproduction in the female, which, both from their organization and from the nature of their peculiar functions, are more frequently than any other the subject of hemorrhage.

Dr. Barnes, in his lectures on obstetric operations, has so fully entered into the history of perchloride of iron as a uterine hemostatic, that nothing here need be said about it. It may, however, be worthy of observation, that he invariably used the styptic in the form of solution.

Dr. Snow Beck and others have taken exception to the employment of the drug: some to its being used under any circumstances, deeming it capable of absorption, and consequently liable to produce pyemic poisoning; others, on the ground of it being forced into the uterine sinuses, or up the Fallopian tubes, and thus effecting irreparable damage to the system of the patient.

Dr. Barnes, the one to whom all credit is due for its introduction into obstetric practice, apprehends that, reasoning from general knowledge, it may, in the form of injection, be not entirely free from danger, for he states that the *fluid* may enter into the circulation, and cause thrombi in the bloodvessels; air may be carried into the uterine sinuses, and transferred from thence to the heart; and the injected fluid may run along the Fallopian tubes, and escape into the peritoneal cavity—the occurrence of any one of which dangers must necessarily imperil the patient's life. Dr. Atthill, in his admirable communication just now read before the Society, strongly advocates the use of the drug, but he too has used only the fluid preparation.

To the employment of iron in a different form from that hitherto

recognised, I am indebted in a great degree to accident, and to the fertile ingenuity of Mr. William Ormsby Wier, the resident medical officer of the Coombe Hospital. In January, 1872, an extern midwifery case, residing at some distance from the hospital, having arisen, wherein it appeared to my judgment, that the application of the perchloride of iron was immediately demanded, and neither myself nor my assistants being supplied with the ferric solution, or the apparatus for its employment, Mr. Wier suggested the feasibility of introducing with the hand a small piece of the *solid salt*, some of which he had with him, and painting therewith the bleeding surface of the uterine cavity. The effect was instantaneous—the hemorrhage stayed, the uterus contracted, the vitality returned, and no untoward consequences resulted. In fact, so satisfied was I at the happy and favourable termination of the case, so rapid were the introduction and action of the remedy, so certain was the knowledge obtained during the performance of the manual operation, that in each and every one of the cases about to be briefly submitted to you I have adopted the same line of treatment, and with what result the sequel will show.

Since January, 1872, there have been in the intern and extern practice of the Coombe Hospital, no less than 23 cases where the use of the perchloride of iron to the interior of the uterine cavity was rendered absolutely necessary. This to some may seem a large number, but I would have it remembered that since I became connected with the hospital, in October, 1871, there have been attended in the institution itself, and in the extern maternity connected therewith, over 4500 cases. In this large number it need not be surprising that hemorrhage has necessarily resulted in many instances; more especially in the extern department, which included nearly 3500 of the whole. These latter cases frequently meet at the hands of inexperienced students treatment not always desirable, and the patients themselves are in many instances the victims of drink, starvation, and all kinds of wretchedness. The number of cases therefore needing the use of the iron, when compared with the total number of cases delivered—23 out of 4500—is not so very large as it may seem at first sight.

Of the 23 cases in which the perchloride of iron in a *solid* form was used, 14 *recovered well*, by which I mean that from the completion of their labour to the eleventh day their convalescence was uninterrupted.

Three made *tedious recoveries*, one of which was caused by constitutional syphilis, a disease debilitating in the extreme, and in every way militating against the patient's speedy return to good health; while the remaining two were threatened with pelvic cellulitis, but ultimately did well, the first being convalescent on the eighteenth day, the second on the twenty-first. It is clear that this condition can be attributed in neither of these cases to the employment of the iron, inasmuch as the experience of every obstetric practitioner demonstrates, that pelvic cellulitis more frequently results from the

manipulation and other treatment necessary to control hemorrhage than from any other cause.

Of the 23 cases there were *six* deaths. From this number must be deducted two cases which died—one within two, and the other within three hours after delivery—in neither of which the employment of the drug could possibly have had any part in producing the fatal result. This leaves but four to be considered.

One died on the ninth day from phlebitis, but she had all the symptoms and physical signs of advanced pulmonary consumption. The experience of every medical man tell us, that phthisis pulmonalis in its advanced stages is apparently arrested during gestation, but that no sooner has delivery been completed, than it again assumes the mastery, and hurries the patient with terrifically rapid strides to a comparatively early grave. Moreover, the tendency of constitutional diseases of this class predisposes the system to phlebitic and other septicemic attacks. Is it not reasonable to suppose, therefore, that the death in this individual case was the result of natural causes, and not effected in any degree by the employment of the drug.

Another case, the second of the four, may also come under the same category, and be freed from the probability of having died from the use of the styptic. In this case a portion of the placenta, which was morbidly adherent over its entire surface, could not be removed. Here we have at once a cause adequately sufficient to account for her death from pyemia, without attributing it to any other circumstances.

In the third of the four, the placenta was adherent in a partial degree, the hemorrhage before and following its removal was of the most formidable character, and although promptly restrained by the employment of the iron, the patient at once fell into a most prostrate condition, from which she never rallied. Never was her pulse below 120, never did the functions of the animal economy exercise their rightful sway, fainting fit after fainting fit subsequently occurred, and on the tenth day she succumbed, threatened with all the symptoms of approaching phlebitis. This case surely tells its own tale, and its history removes it from the category of those fatally influenced by the agent referred to.

But one case remains now for our consideration. Here the placenta was adherent. She was an unfortunate, and when admitted to hospital was in a most enfeebled condition, diseased alike in mind and body. Her death took place on the ninth day, apparently from the mere sinking of the powers of life, without any distinct disease to which to attribute it.

It is but right to state that a post-mortem examination could not be obtained in any of the fatal cases. They were all extern, and to overcome the Irish prejudice against examinations of this kind demanded greater eloquence than I possessed.

It will, I think, be apparent to all, that in each and every one of the last four cases detailed, more than sufficient cause existed for the in-

duction of the diseases which terminated fatally. True, iron has been used in all of them, but because that number died, can we fairly argue that death was the result of its use? I think not! But, for the sake of argument, let us hold that it was so. It must be borne in mind, that out of the 23 cases in which it was used, all, or at least a very large proportion of them, would have died were it not for its employment, every means known to science having been adopted in each case respectively, but without avail. Every patient was running down rapidly, a fatal result appeared impending, and the styptic applied only when she was almost *in extremis*; and yet, of the whole number, only four succumbed after its application. Surely, the rescuing of the larger number was cheaply purchased at so comparatively small a cost, and I feel no hesitation in holding that the first duty of a medical man is to tide over the immediate danger, irrespective of future contingencies; the more especially as such are, as demonstrated in the cases submitted, only exceptional, and—when they do arise—are in many instances amenable to treatment. In fine, to use the words of Dr. Barnes, “to withhold this remedy then from a woman bleeding to death, because it may do immediate or ulterior harm, is at once illogical and wrong. The first pressing duty is to save the woman from dying. The case is, that other means being exhausted, she would die unless local styptics be applied. Where then is the force of the objection, that these styptics may do ulterior harm?”

BRITISH MEDICAL ASSOCIATION.

ON TRANSFUSION OF BLOOD.

By HENRY M. MADGE, M.D.

Vice-President of the Obstetrical Society of London.

(*Paper read in the Obstetric Section at the Annual Meeting. Revised and Augmented.*)

The object of this paper is to give a short *résumé* of the present state of the question of transfusion. The history of the subject is curious and varied. Transfusion has had, as it were, many ups and downs; now, for a time, attracting much attention and exciting great expectations, and then, for a long period, almost sinking into oblivion. To those who would like to dive into its interesting historical details, I would recommend the writings of Martin of Berlin, Oré of Paris, Gesellius of St. Petersburg, and, among our own countrymen, Waller, Routh, and Aveling; also the *Transactions of the Royal Society*, extending as far back as two centuries ago. Even at that remote period transfusion was a good deal talked about, and the most exaggerated notions were formed of its capabilities. The old were to

be made young, and enjoy perpetual youth, and all diseases, including insanity, were to be removed. As the operation came far short of such pretensions, and as one or two deaths followed its performance, it fell into disrepute and disuse. It is due to Dr. Aveling to say that the recent revival of the subject with us has been, in a great measure, brought about by a successful case of immediate transfusion, an account of which he read before the Obstetrical Society of London. The Society at once appointed a committee to collect evidence, and to test, as far as possible, the real claims of transfusion to the confidence of the profession. As honorary secretary to that committee, I am able to state that a great deal of evidence has been collected. Besides a good deal of oral evidence given before the committee by several eminent physicians, and the reception of several papers from British authors, numerous books, pamphlets, and instruments have been received from many parts of the Continent. It is with the view of still further increasing this stock of information, that the committee have desired me to bring the subject before this meeting. We hope there may be some here who have had cases of transfusion, and will give us the result of their experience.

In theory, nothing can be more plausible than transfusion. A person is dying from loss of blood; how easy it would appear to be to rescue that person from death by throwing blood back into the system. Again, a patient is gradually sinking from some morbid condition of the blood—pyemia, chemical poisoning, or any form of blood-poisoning or blood-alteration. It seems feasible enough that to take away the morbid blood, and to replace it with blood taken from a healthy individual would be sufficient to restore the patient to health. Unfortunately, however, in this matter, as in many others, practice does not run so smoothly as theory. With regard to blood-poisoning, an idea respecting hydrophobia has occurred to me, which I daresay has occurred to others. As all kinds of treatment hitherto devised for that formidable disease have proved useless, I would suggest that transfusion be tried, either by unloading the vessels of the poisoned blood, and injecting healthy blood, or by injecting some chemical solution into the veins, with the view of neutralizing the poison. Leisrink, in a paper on transfusion (Volkman's *Sammlung Klinischer Vorträge*, 1872), says:—"Transfusion is indicated in all those pathological conditions where the blood, in quantity and quality, is so altered that it is unfit to fulfil its physiological duties." It is to obstetricians, however, that transfusion possesses the deepest interest. Although, of course, available in traumatic or any form of bleeding endangering life, it will, if it ever becomes a frequently performed operation, be more in connexion with uterine hemorrhage than with anything else. The immediate effects of injecting blood into the veins seem to have been very varied. Some have started up, as if from a long sleep, moved their limbs, and asked for food; others—even those who eventually recovered—have only slowly shown signs of returning life. In general, the pulse soon

becomes stronger, the respirations more regular, and the skin warmer. Some have experienced rigors, and others a feeling of warmth throughout the system. If the favourable symptoms are not maintained, the operation should be repeated, because their appearance shows that the system is capable of responding to the means employed.

The forms of transfusion which are now most in vogue, and which have been attended with the greatest amount of apparent success, are—

1. Transfusion with defibrinated blood.
2. Mediate transfusion with pure blood.
3. Immediate transfusion from "vein to vein."
4. Immediate transfusion from "artery to vein."

1. *Transfusion with Defibrinated Blood.*—In most of the cases recently performed at home and abroad, defibrinated blood has been used. Dr. Playfair of London and Dr. Robert McDonnell of Dublin strongly recommend this plan. Dr. McDonnell has had several successful cases, and one particularly interesting and successful in connexion with the late Dr. Beatty (*Dublin Quarterly Journal*, May, 1870). The great advantage of using blood deprived of fibrin is, that there is no fear of clotting. This makes the operation easier than with pure blood, as it can be done more leisurely and without much assistance. The advocates of this plan say that fibrin, as it exists in venous blood, is waste material, and useless, and that the real revivifying element is the oxygen contained in the red corpuscles. This may, or may not, be true; the balance of scientific opinion is in its favour; but, perhaps, there would be more candour shown in saying that the real reason for getting rid of the fibrin is, because it interferes with the operation. The opponents of the plan maintain that fibrin is an essential element of the blood, that it favours coagulation, helps to build up the tissues, and that, when its removal is attempted, there will always remain small particles or shreds, which may produce pyemia or embolism. It is certainly true that, in many cases of recovery from impending death after transfusion with defibrinated blood, patients have died in a few weeks from pyemia; but, of course, this may have arisen from various other causes. If the defibrinating process be carefully done, there is not much danger of finding shreds of fibrin in the strained fluid. I have proved this by repeated microscopical examinations. The blood should be caught in a basin, and whipped with a fork, a small stick, or—as Dr. De Belina advises, for the sake of cleanliness (this is most important in dealing with transfusion)—one or two twisted glass-rods. After a few minutes, the fibrin will be found adhering to the rods, and the blood, having been strained two or three times through fine linen, is ready for use. Muslin or coarse linen must not be used for straining. Violent whipping must also be avoided, as it is supposed to be possible in this way to burst or damage the blood-corpuscles. There is

no doubt that, with ordinary care, defibrinated blood may be safely injected into the veins. Numerous instances are on record where patients have survived its employment, and lived for years.* This form of transfusion does not necessarily require a special apparatus: a common syringe has often been used with success. Indeed, most of the instruments that have been invented are merely modifications of an ordinary syringe.

Dr. De Belina has related a case in which transfusion was successfully employed in resuscitating a new-born child. The blood found with the placenta was defibrinated and injected into the umbilical vein with a common syringe ("De la Transfusion du Sang Défibriné," Paris, 1873, p. 8). In devising instruments for using defibrinated blood, the great aim seems to have been to prevent air from entering the veins. Some are glass syringes fitted with a canule to enter the vein, and graduated to hold four or six ounces of blood—the quantity usually employed. When used, the piston is withdrawn, and the blood poured into the syringe from above; the piston is then replaced, and the contents of the syringe discharged, with one slow downward stroke, into the vein. The action of the piston, and consequent entrance of air, of the ordinary syringe is thus avoided. Dr. Braxton Hicks's instrument and Dr. Graily Hewitt's are made on this principle. Dr. McDonnell uses a glass cylinder in the form of a syringe, but without a piston, holding about six ounces; to the nozzle is fixed a long india-rubber tube, with a canule at one end to enter the vein. The blood in the cylinder finds its way into the vein partly by gravitation and partly by a small propelling bulb placed in the middle of tube. If this be insufficient to drive the blood on, the operator blows gently, with the mouth applied to the opening at the top of the instrument. Dr. De Belina's instrument is somewhat similar; but, instead of using the mouth to supply air-pressure, he uses an elastic tube and bulb, worked like an ether-spray apparatus. There is no elastic tube fixed to the nozzle, which is curved and fitted with a

* Dr. Soutouguine, physician to the Cesarewitch, called on me when in London, and gave me an account of some experiments he had made on dogs. They were undertaken to determine the immediate and remote effects of transfusion with defibrinated blood, and had evidently been performed with precision and care. One dog was first weighed, and, calculating in this way the amount of blood in its body, it was bled nearly to death, so that the beats of the heart were scarcely perceptible. Another dog was then served in the same way, and the defibrinated blood of one was injected into the veins of the other. Six dogs were experimented on: one died from erysipelas springing from the wound in the vessel; the remaining five quite recovered, and were observed to be in vigorous health for several months. For some time after the operation they were weighed every day and their excretions examined, and found to be normal. Dr. Soutouguine also injected the blood of a rabbit into the veins of a dog, with the effect of causing bloody urine, wasting, and death. Experiments were also made with defibrinated blood that had been preserved for some time—the notion being that it might be kept always ready for use. The dogs that were transfused with it did very well. Although possible in Russia, this would hardly be a safe proceeding here. I have found that defibrinated blood has a special tendency to become rapidly stale and fetid.

canule. Dr. Richardson's instrument is much of the same character. Dr. Playfair uses a modification of Aveling's instrument. The end provided with the canule is placed in the open vein, and the other in the vessel containing the prepared blood, and it is then worked in a simple and effective way, like a Higginson's syringe. Many other instruments have been invented, but those I have mentioned are, perhaps, the most important, and all are well adapted for the purpose.

2. *Mediate Transfusion with Pure Blood.*—Using pure or non-defibrinated blood would, no doubt, be preferable in all cases, if it could be done with ease and safety; for, after all, defibrinated blood is a disorganized fluid, and is only used because the presence of fibrin is inconvenient. With pure blood, clots are apt to form and block up the instruments, and, what is of more consequence, small clots may enter the vein, and lead, like carelessly prepared defibrinated blood, to pyemia and embolism. Notwithstanding its drawbacks, the use of pure blood has many advocates both at home and on the Continent. Mr. Higginson of Liverpool has had the largest and most successful experience of mediate transfusion in this country. He has had fifteen cases, and ten were successful (*Liverpool Medical and Surgical Reports*, vol. v.). He does not seem to have encountered much difficulty from clotting. The instrument which he has invented for the operation is to some extent a modification of the syringe which is known by his name. It is bulky in appearance, caused by the rather unnecessary precautions taken to keep the blood and the instrument warm, and to prevent the entrance of air into the vein. Modern views on this subject are very different from what they were. Up to very recently, it was always held to be of great importance that a certain high temperature of the blood should be maintained to prevent coagulation. Dr. Richardson and others have shown that heat favours coagulation, and that cold retards it. There is still a diversity of statements as to the exact time at which fresh-drawn blood begins to coagulate, owing, no doubt, partly to varying conditions of temperature, and the shape of the vessel used to receive the blood. The time is variously given from one minute to five or six minutes. Artificial cold is said to retard coagulation for several hours. A short time ago, in damp weather, the thermometer standing at 60 Fahr., I noticed that bullock's blood, received into a common basin, commenced to coagulate in about five minutes. This would give ample time for injecting the requisite amount of blood into the vein. The great point is to have everything ready, and not to take the blood from the arm of the donor until the arm of the patient is prepared and ready to receive it. The hurry to get through this form of the operation, for fear of clotting, is certainly one of its drawbacks. To prevent coagulation of the blood, Dr. Braxton Hicks has recommended the addition of a small quantity of phosphate of soda (*Guy's Hospital Reports*, 1868, p. 14), and Dr. Richardson minute quantities of ammonia. Even in very small proportions, the ammonia not only prevents or retards coagulation, but,

in transfusion, it acts as a stimulant to the system. Great care is required in using it. Injected into the veins of a dog, insufficiently diluted, it produced convulsions ("On the Coagulation of the Blood," 1856, p. 120). The entrance of air into the veins has always been one of the bugbears of transfusion. There is now reason to think that too much has been made of it. Oré has shown, by experiments on dogs, that a large quantity of air throw into the femoral vein will cause death in a few minutes, but that a small quantity, such as might accidentally get into the veins in ordinary transfusion cases, does no harm ("Etudes sur la Transfusion du Sang," Paris, 1858). These experiments have been repeated by several German physiologists. With these considerations, one need not be afraid, in a case of emergency, of using an ordinary syringe, although, of course, the less air admitted the better. Many of the instruments used for defibrinated blood are almost equally well adapted for pure blood. The quantity used in Mr. Higginson's cases was from four ounces to twelve ounces—in one case, twenty ounces.

3. *Immediate Transfusion from Vein to Vein.*—The revival and improvement of this method in England is, we all know, due to Dr. Aveling, who has written so much and so hopefully about it, that we must all desire to see his hopes realized. An objection already noticed has been raised to venous blood. It is said to contain all the impure débris of the tissues, and must, therefore, be injurious. This perhaps would be met by saying that the veins are the proper receptacles for venous blood; and that, once in the patient's system, it soon becomes arterial. The immediate method has many supporters on the Continent, and instruments have been devised for its performance by MM. Mathieu, Longet, Oré, and others. The current of blood in the veins being without impetus, the difficulty of sending the blood from vein to vein through a small tube has been met in various ways, but by none so successfully as by Dr. Aveling. His simple and ingenious instrument consists of a small india-rubber tube about a foot long, with a bulb in the centre. The ends are provided with canules for entering the veins respectively of the donor and the receiver of the blood; and, as Dr. Aveling says, it forms a sort of anastomosis between the two individuals. The blood is propelled along the tube by a manipulation of the bulb and of the tube itself, a knowledge of which can only be acquired by practice. I should recommend those who procure the instrument to practise passing water through it transfusion fashion—that is, according to Dr. Aveling's instructions (*Obstetrical Transactions*, 1865, p. 132). It only requires a little practice; but that little is essential, and will make its use much easier when it is really wanted. By the use of this instrument the dangers of clotting and of the entrance of air are reduced to a minimum. Dr. Aveling's experience has not as yet been large, but the plan seems to carry with it the promise of great future success. Dr. Savage of Birmingham has recently used Aveling's instrument in a successful case of transfusion, and speaks very highly of it. Dr. Aveling does

not think it necessary to follow the old plan of dissecting out the vein in the patient's arm and passing ligatures or a probe beneath it. He merely exposes the vessel, and makes an opening in it for the reception of the canule, which is kept in its place by the finger and thumb of an assistant. Of course this proceeding is applicable to every form of transfusion. Dr. Schliep, of the German Hospital, uses a modification of Aveling's instrument. Instead of the ball in the centre of the tube, he substitutes a syringe, with double action, like that of a stomach-pump or aspirator. This seems to give a greater command over the blood passing through the tube, but the continued action of the syringe would probably lead to clotting. When it is difficult to get any one willing to be anastomosed with the patient, or if, during the operation, the donor of the blood should become faint, recourse must be had to the mediate method.

Immediate Transfusion from Artery to Vein.—This is the oldest form of transfusion; and, as the earlier operations were made on animals, no difficulty was experienced. The carotid artery of one animal was connected by means of a small tube, having small glass or metallic tubules at each extremity, with the jugular vein of another, the blood being driven onwards by the arterial impulse. When, however, arterial transfusion came to be applied to the human subject, opening an artery was considered to be too formidable an undertaking, and recourse was then had to the arterial blood of one of the lower animals—a sheep, lamb, calf, or dog. A great outcry was made against this. It was absurdly supposed that the transfused blood would carry with it something of the nature of the animal from which it was taken, and that patients would bleat like sheep and bark like dogs. The blood-corpuscles in many animals are larger than in man, and, it is supposed, would not easily pass through the human capillaries; but those of the lamb and the dog are smaller, and are therefore suitable for transfusion. At the present time, whenever arterial transfusion is attempted, the blood of the lamb is used.* A very interesting case of this kind has lately been published by Dr. Albini, Professor of Experimental Physiology in the University of Naples. The patient had severe menorrhagia, and was sinking from loss of blood and from inability to retain anything on the stomach. Transfusion was performed by connecting the carotid artery of a lamb, by means of an elastic tube, with one of the brachial veins. The good effects were perceptible at once, and the patient improved in a few days so as to be able to eat and drink almost as usual. On the eighth day, a fresh accession of hemorrhage occurred. Transfusion was again performed on the following day, but this time without benefit. Severe rigors

* The *London Medical Record* (Dec. 31st) contains an account of twelve cases of the direct transfusion of lamb's blood by Dr. Oscar Hasse. The patients were suffering from phthisis, chlorosis, dysentery, &c., and all were benefited. The account is taken from the *Allgemeine Wiener Medizinische Zeitung* for December, by Mr. Bellamy.

were experienced, and peritonitis from supposed extension of uterine disease set in; and death soon followed ("Relazione sulla Trasfusione diretta di Sangue d'Agnello," Naples, 1873, p. 8). Another case of the same kind has recently occurred in America, the details of which I have not yet obtained. The blood of the lamb should only be used when there is difficulty in obtaining human blood. There is something repulsive in the idea of bringing an animal into the sick-chamber, and of mixing animal with human blood. In this suggestion, however, there may be more of sentiment than of science.* Shock to the patient would be avoided by obtaining the blood in an adjoining room, and using it pure or defibrinated, by the mediate method. For the immediate method, the lamb must be firmly secured by straps, the least movement being fatal to the operation. Professor Albini gives a drawing in his pamphlet showing how this is managed. Dr. Guérin of Paris is bold enough to recommend human arterial transfusion. It must, however, be left to surgeons to decide whether, under such circumstances we should be justified in opening an important artery. There is this to be said for arterial transfusion, that the blood is purer; and the drawbacks to venous blood, defibrinated or otherwise, whatever they may be, would be avoided. Dr. Guérin has repeated an experiment which was performed by Blundell and others long ago—a sort of double transfusion. Two dogs are placed side by side, and the carotid artery of each animal connected by means of a tube with the jugular vein of the other. In this way they obtain a common circulation, after the fashion of the Siamese twins. Although a most interesting experiment, this can only be regarded as one of the curiosities of transfusion.

It might happen that it would be impossible to get a supply of blood of any kind just when it is wanted. In such a case, it would be an advantage to have a substitute at hand. Some have recommended milk; others a very weak solution of ammonia. Saline solutions of various kinds have been used, also serum, or an imitation of it, particularly in cases of cholera; only, however, with partial success. The solution should be about the same specific gravity as that of the blood; and, according to Dr. Pavy, the salts of potash should never be used (*Guy's Hospital Reports*, 1868, page 6). Injecting plain water into the veins is dangerous, as it causes the blood-corpuscles to burst, and disorganizes the blood. Further experiments are required to establish the safety and utility of saline solutions and other substitutes for blood in transfusion.

If the question be now asked, Which is the best and safest form of transfusion? I think it must be admitted that, in the present state of our knowledge, each of the four principal forms I have mentioned may be employed with an almost equal chance of success.†

* As Dr. Barnes said in the discussion on the paper, "It is only taking lamb in another form."

† I ought, perhaps, to state that in this paper I am only giving my own opinions. No formal or definite conclusions have as yet been arrived at by the Committee.

For a more minute description of the various steps of the operation in the different modes of transfusion than I have given, and for fuller details of cases and descriptions of instruments, I must refer you to the writings of the authors whose names I have mentioned. It is one of the misfortunes of transfusion that, like a great many other therapeutic measures, its *modus operandi* is not quite understood. To place it on a sound scientific basis, we must know more than we do at present about the physiology and pathology of the blood. It will not do, however, to reject transfusion because we cannot explain the exact way in which it does good and saves life. If this rule were followed, we should have to give up nearly all our best remedies. It has generally been supposed that, when blood is injected into a vein of an almost moribund patient, for the purpose of resuscitation, it goes direct to the heart, which is stimulated to increased action by the presence of its natural stimulus. Hüter, however, states, and seems to have proved by experiment, that by venous transfusion the blood does not go direct to the heart, but becomes lost or diffused in the general venous system. He recommends arterial transfusion, but of a different kind to that already referred to—namely, sending blood to the heart through one of the arteries in the neighbourhood of that organ (*Archiv für Klin. Chir.*, vol. xii. ; *Centralblatt*, 1869, No. 25). There are many obvious objections to this plan, and the trials and experiments that have been made to illustrate it are not encouraging. I mention it here partly for the boldness and novelty of the suggestion, and partly to show that we are still somewhat in the dark about this part of the subject. If Hüter's theory regarding venous transfusion be correct, we get rid of one of the supposed dangers of transfusion—that is, over-distension of the right side of the heart. The dread of this danger has been pretty generally felt, and to avoid it we are cautioned to inject the blood slowly and in moderate quantities. It has been a matter of surprise with many, that the quantity of blood used in transfusion is so small, compared with the quantity lost; but when a patient is reduced by loss of blood to the lowest ebb, a few ounces would be sufficient to turn the scale either way—by further abstraction, towards death; by addition, towards a restoration of the equilibrium of the circulation. Whether the latter is brought about by the mechanical effect of adding something to the bulk of the blood in the body, or by stimulating the heart and vessels, are points that can only be settled by experiment.

There are several other points connected with the subject surrounded with difficulties. Indeed, transfusion, although somewhat ancient, may still be said to be in its infancy. By many, it is altogether regarded with scepticism. It is said that those who recover after transfusion would recover just the same without it. One writer says that "transfusion is a sort of Will-o'-the-wisp of science, holding out the most brilliant prospects, which never seem to be realized." There is, no doubt, much in the history of transfusion to justify scepticism as to its real value; but there is also no doubt that it has

had its triumphs as well as failures. A large number of well authenticated cases of success are on record—quite enough to encourage us to thoroughly investigate the subject, to endeavour to remove all doubt, and thus, if possible, to secure to the profession an effective means of saving life when all other means fail; for it must always be remembered that transfusion is only to be used as a last resource. In this important work, the Committee on Transfusion invite the co-operation of all those members of the British Medical Association who take an interest in the subject. The points calling for further inquiry appear to the Committee to be as follows:—

1. The exact time that human blood takes to coagulate when drawn from a vein. (This is suggested from the different results arrived at by various authors, and from the fact that Mr. Higginson has found but little difficulty in transfusing blood in its natural state.)

2. Does blood, when injected into a vein, go direct to the heart, or does it become lost or diffused in the general venous system?

3. The effects, immediate and remote, of transfusion with blood kept in a state of non-coagulation by means of phosphate of soda, as recommended by Dr. Hicks.

4. The effects, immediate and remote, of transfusion with blood containing ammonia, as recommended by Dr. Richardson.

5. The effects of transfusion with milk.

6. The effects, immediate and remote, of transfusion with defibrinated blood.

7. The microscopic examination of defibrinated blood.

8. The effects of transfusion on one of the lower animals by the immediate method, on Dr. Aveling's plan, from an animal of the same species.

9. Transfusion with blood in its natural condition, as in Mr. Higginson's cases.

10. Further inquiries to show whether the blood of the lamb or of any other animal might be introduced with impunity into the human system.

11. Transfusion with defibrinated blood, with the addition of ammonia or phosphate of soda, or both combined.

12. Transfusion with saline solutions.

13. Further experiments to show how long an animal deprived of food would live on blood transfused daily.

Obstetric Summary.

Transfusion.

Dr. R. Barnes relates the following case in the *Lancet* :—

"A short time ago I met Dr. Devereux, of Tewkesbury, at a case of extreme exhaustion from secondary post-partum hemorrhage. At one time it was thought the patient was dead, so utter was the pros-

tration. The pulse rallied now and then, but often flagged so that it became imperceptible; the respiration was laborious and frequent, so loud that it could be heard in the adjoining room; the face and extremities were cold; the voice almost extinct. She swallowed beef-tea and port from time to time, but soon vomited all. This was about 8.30 P.M. The extreme prostration, and the hopelessness of getting any nutriment absorbed either by stomach or bowel, led us to look upon transfusion as the last hope. Discussing the means of accomplishing this, we found the best we could do was to use an aspirator-syringe. This had to be fetched at a distance of five miles. In the meantime I had got everything ready. The gardener offered an arm. At 10 P.M. the operation was carried out. The syringe being made on the principle of the stomach-pump, with reversible action, answered extremely well. We filed down the point of the aspirator-trocar, and this served very fairly for insertion into the patient's vein. As circumstances left no choice between immediate and mediate transfusion, so were we compelled to defibrinate the blood. The man who yielded the blood was fat, and his veins small, so that it was with difficulty we obtained four ounces. This was defibrinated by whipping with a silver fork and filtering through a cambric handkerchief. Believing that one factor in the danger attending these cases of prostration is the merely dynamic one arising from the absence from the heart and vessels of fluid to act upon, and considering that we had so small a quantity of blood at our disposal, I first filled the syringe with a solution of phosphate of soda, carbonate of soda, and chloride of sodium, at a temperature of 100° F. Pumping this through the syringe also served to get rid of air from the apparatus. The vein in the patient's right arm was found by pinching up a fold of skin, transfixing it transversely to the course of the vein, and then dissecting through a little fatty cellular tissue. It was then pinched up by forceps, and a sufficient opening made into it. The trocar was passed one inch and a half into it. The injection was then slowly made. The blood was partly mixed with the saline solution; altogether about six ounces of fluid, including all the blood, was thrown in. Almost instantly the pulse improved, warmth spread over the body, the face and manner became more natural, the respiration became tranquil, and we were tempted to hope that she might pull through. We prepared everything for repetition of the transfusion in the morning should the condition be favourable. But the rally was short; the respiration again became moaning, rapid, and laboured; the pulse flagged, and the patient sank at 1.30 A.M., about three hours after the injection.

"Amongst other reflections suggested by this and similar cases are the following:—

"1. The vomiting of the beef-tea and wine, which had been accumulating in the stomach from repeated exhibition in small doses, in an unchanged state, and the obvious failure of any restorative effect, are proofs that the vital power is so low that nothing is to

be hoped for in the way of replenishing the empty circulation from absorption.

"2. The rapid and laboured respiration is evidence of the craving of the system for oxygenated blood. Air goes in and out of the lungs with great rapidity, but it has nothing to act upon. Its obvious effect is to accelerate the cooling of the body.

"3. When we see things at this point—extreme exhaustion, feeble or imperceptible, pulse, rapid laboured breathing, non-response of the system to nutriment and stimulants administered by the stomach or rectum, and vomiting and great agitation—we may fairly conclude that direct injection into the vessels is indicated.

"4. Blood may be used either whole or defibrinated. The choice will be governed by circumstances. If we have Aveling's or other proper apparatus to practise transfusion from arm to arm, so that the blood passes direct from giver to receiver without ever being exposed to the air or allowed to rest, this will often be the preferable plan; but where the proper apparatus is wanting, as it is likely to be, defibrination is better.

"5. The experience of Dr. Little in cholera cases, and other considerations, show that saline solutions may be injected into the veins with advantage. I believe that they may, with great utility, be used to supplement or to dilute the blood used in transfusion for loss of blood, and that not only is the saline fluid useful by virtue of its chemical properties, but also by its physical quality of bulk, supplying a volume of fluid upon which the heart and vessels can act more effectually.

"6. That transfusion will be more and more extensively resorted to appears to me certain. Its extended use, however, must greatly depend upon a general understanding of the conditions that call for the operation, and of the various modes of performing it. So long as it is considered necessary to have a special apparatus, the operation must be performed rarely. But let it be understood that blood either whole or defibrinated will do, and that almost any syringe can be made to answer, and the great obstacle to the extension of the operation will have vanished. Nothing can be more easy than to furnish every stomach-pump case with a flexible tube to which a transfusion-canula is attached. As no practitioner of medicine ought to be without a stomach-pump, the *necessary* apparatus will never be wanting. I should not hesitate to use an ordinary Higginson's syringe.

"7. Here, as in all great emergencies, an essential condition is to *act in time*. Just as the perchloride of iron may be used too late, so may transfusion or injection be delayed until the nervous centres will have lost the power of responding to the fresh pabulum supplied."

Intra-Uterine Injections of Perchloride of Iron.

Dr. Joulin, in his *Gazette* under *Revue des Journaux*, writes:—
 “I have several times had occasion to speak of intra-uterine injections of perchloride of iron as treatment for post-partum hemorrhage, and I acknowledge that I am not at all in favour of them. On this point I regret to have a contrary opinion to that of Professor Barnes, who, in my opinion, is one of the most eminent obstetricians in England. I rest my opinion on the facts adduced in a discussion of this subject at the Obstetrical Society of London. Apropos of this I said, ‘When it is a question of life and death, we ought to be dispassionate and free from selfish thoughts. Under the pretext of progress, let us not introduce scientific novelties which all the world freely acknowledges are dangerous, but which few people are prepared to certify as useful.’

“In its last number, the OBSTETRICAL JOURNAL states with regard to the employment of the perchloride, ‘The opinion of those who have tried it is almost unanimously favourable. Those who doubt its efficacy or believe it to be dangerous, are represented in England by Dr. Snow Beck, and in France by Dr. Joulin.’ As far as I am concerned, I will not protest against the opinion attributed to me. I know no facts personally, and certainly shall not have any until they settle the point by experiment in England. At first glance, using perchloride of iron for injections to the womb frightens me, and not without reason. In the discussion at the Obstetrical Society sufficient fatal cases were brought forward to justify my fear, and to prove that the agent is a dangerous one.

“In a discussion of this nature, nothing is without moment to the observer, and by the way in which the facts were dwelt upon by the members, I was easily convinced that they were stepping on new and imperfectly known ground. An absence of rules and method was perceived, a want of precision in the knowledge of the indications to be fulfilled, which proves that if there is something to be hoped for from the injection of perchloride of iron to check bleeding after delivery we are not yet in a position to assert it.

“It is said truly that this agent ought only to be employed as a last resource, but on observation, an impatience for making experiments is noticed, which leads to a neglect in using well known means which should have been tried at first. It is quite clear that there has been too much haste; at the same time I know that the value of a remedy depends upon its frequent and successful application. But the failures are multiplied in the same proportion in the case of an agent which is too energetic, or the employment of which has not been well regulated. Then, to the first infatuation follows mistrust, and, at last, complete repulsion. In proceeding with prudence and watching only the well-marked cases, a definite result comes more slowly, but then it possesses a scientific value. Let practitioners of great experience unravel the question, reserving the injection of the perchloride for those cases urgently requiring it; let them fix limits where

tentative efforts should cease ; but above all let precise indications be given, and then one need be no longer shocked by discussions marked by assertions wanting in weight because wanting in precision.

"Thus, in last year's controversy, Dr. Heywood Smith says he treated, without employing other means, a bleeding occurring from the tenth to the twenty-first day after labour, and he acknowledges, in the same discussion, that this treatment is only of use in primitive hemorrhages. Dr. Holman says his confidence in the perchloride is so great, that he never goes to a labour without being provided with this article and the means of using it. Dr. Murray declares the only danger in the perchloride is failing to use it early enough.

"Let them try and reconcile this if they can with the statement that the injection is used as a last resource, and in desperate cases.

"I know these are individual opinions which probably Dr. Barnes does not share ; but when such contradictory statements, on a grave question, can be produced before an assembly like the Obstetrical Society, one has a right to say the question is still *sub judice*.

"I therefore maintain my opposition to the injection of perchloride of iron to the uterus, and if I can prevent their introduction into France, I shall congratulate myself. At the same time I do not allow my mind to be made up, and I shall praise them soon enough, when the English shall have attained more unequivocal results.

"Let us content ourselves in France with our present resources, which satisfy us sufficiently well to prevent us abandoning them for the perchloride."

Gynecic Summary.

Menstrual Neuroses.

By Dr. BERTHIER.

The following notice of a new memoir, by Dr. Berthier, is from the April number of the *Archives de Tocologie* :—

The work which Dr. Berthier has published is, as he himself says, "but a detached leaf of a book which our generation has composed : the reciprocal influence of the physical and moral." Our learned confrère, who has passed the greater part of his life in asylums for the insane, and who is still at present Chief Resident Physician of the Bicêtre Hospital, has already by former publications sought to elucidate the obscure etiology of these nervous diseases which assume so many diverse forms, and of which the point of origin so often escapes our investigations. The present publication is an important complement of the first researches of the author, and this is not to be his last word on the subject, since he announces, to appear soon, another work on the same subject under the title of "The Diasthetic Neuroses."

Dr. Berthier recalls first in his general considerations "the more or less palpable connexions, the more or less intimate relations" existing between the different organs which compose the

human body, and he particularly insists, in relating facts in support of it, on the incontestable sympathy which unites the brain with the uterus. He afterwards recalls the cases current in science in which a fibrous tumour of the womb, a uterus in a state of anteversion, the exaggerated distension of the organ by an accumulation of blood, &c., have given rise to facial neuralgias, epileptic attacks, tingling and cramps in the pelvic members, suffocation, dyspnea, troubles of the digestion, &c.—accidents explained by reflex action. He then recalls the principal points of the phenomena of physiological menstruation, and, after some examples, he concludes by saying, “Woman during the time of her fecundity ought to be regular, because her organism is the theatre of a general fluxion and of a local fluxion, obstacles to which trouble the repose of the economy. The economy may, under the influence of these obstacles, alone or complicated, experience a crowd of troubles, of which the gravest and most numerous are the sanguineous deviations, principally those which affect the nervous system. We will demonstrate these assertions experimentally.”

And in effect, in the first part, Dr. Berthier relates thirty-five observations of simple neuroses—cephalalgia, migraine, facial neuralgia, blindness, hallucinations, dyspnea, gastralgia, hyperesthesia, &c., which all appear to prove either an obstacle to the menstrual excretion, a trouble in the excretion, or an excess.

Then follow another series of observations to the number of fifty-one, which treat of convulsive neuroses, convulsions, chorea, hysteria, catalepsy, epilepsy, &c., and which permit the author to conclude that “the arrest of the menstrual flow gives rise nearly as often as its excess to convulsive neuroses.”

A third group comprises twenty-nine observations of cerebral affections connected with menstrual troubles, cerebral and spinal congestions, apoplexy, paraplegia, hemiplegia, general paralysis, febrile delirium, meningitis, &c., of which Dr. Berthier concludes that “menstrual troubles, principally suppression, may give rise indirectly or directly, to fluxionary accidents capable of producing febrile delirium with or without epilepsy and the different forms of paralysis, and may end in death.”

In a second part of the work the author treats of insanities connected with troubles of the menstrual flow. He recalls how old is this etiological interpretation of madness, since one finds it in Hippocrates, Aretæus, Coelius, Aurelianus, &c., and that the moderns profess the same opinion, such as Philip Pinel, Fodéré, Esquirol, Felix Voisin, Archambault, Baillarger, Delasiauve, &c. In support of this view there follow 127 observations.

Dr. Berthier, after this conscientious study, ends with the following conclusions :—

“1. Neuroses exist, connected it may be with menstrual troubles simply and directly ; it may be with these troubles caused or brought about by one or many variable pathological states ; it may be with a state of menstruation apparently proper.

"2. These neuroses, which for these reasons I have called menstrual, and of which suppression is the most frequent cause, are cured most frequently by the regularization of the flux, although sometimes the neurosis disappears before the return of the function to its normal state.

"3. Infinite in their form and number, they may represent a diatonic scale beginning with simple headache and ending with apoplexy and madness, which, according to the most ample information, has the most weighty share.

"4. In this latter affection, the courses, even without causal conditions, exercise a marked influence on the progress of the symptoms inasmuch as the final end is sure.

"5. Menstrual madness affects by preference the form of insanity characterized by the general disorder of the mental faculties, that afterwards of the insanity characterized by a perversion of instincts, free from verbal delirium. Nymphomania and hysteria immediately connected with menstrual troubles hold a secondary place amongst the *vesaniæ*, contrary to the beliefs which have reigned at all times.

"6. Menstrual neuroses occupy an important place in pathology independently of the symptomatic menstrual troubles which arise in the course of these affections; and by the empire which the body exercises over the spirit they deserve to fix the attention of the magistrate after that of the physician.

"7. By reason of their complications and course, the therapeutic method which is applicable to them is chemical analysis, consisting in giving to each element its legitimate rank, to combat in its turn, and to attack the evil in its source, situate often at a remote distance from the uterus.

"8. In these different qualities the menstrual neuroses border upon diasthetic, neuroses, and neuroses connected with constitutional states."

After this résumé of Dr. Berthier's work, we have no necessity to eulogize. This collection of 242 observations, ably chosen and reported with sincerity, constitute a whole, which should be read by every one who occupies himself with the diseases of women in general.

Pediatric Summary.

Complete Transposition of the Organs in a Rachitic Fetus.

At the November (1873) sitting of the Société des Sciences Médicales, Dr. Odin showed a rachitic fetus, still-born after a laborious labour, which presented a complete transposition of all the organs—heart, aorta, stomach, duodenum, pancreas, liver, spleen, cecum, and rectum.

In the discussion which ensued, Dr. Bron mentioned that he had lately seen complete transposition of the organs in the person of a young girl of fourteen. Dr. Fochier made the following excellent remarks:—"The transposition of organs is one of the

monstrosities which is most easily produced in the ovipara. In effect all the organs are developed from two symmetrical buds, and it is sufficient to favour or hinder the development of one of these buds to produce the transposition. It occurs whether one covers one half of the egg with varnish, or whether one exposes the half to a more elevated temperature. It is possible that in the first weeks of pregnancy, when the buds are still symmetrical, an analogous cause has brought about the transposition of the viscera."

Another fact of great interest is that the fetus was rachitic, showing that rickets may affect the organism before birth.—*Lyon Médical*, March, 1874.

News.

Midwife's Licence of the King and Queen's College of Physicians in Ireland.

By-law (adopted April 4th, 1874) as to Rules and Regulations respecting Female Candidates for Examination for a Licence to practise as Midwives and Nursetenders:—

Qualifications.—Age, not less than Twenty-one years; Certificates of Character. *Preliminary Examination.*—Reading, Writing, and Arithmetic. *Course of Instruction.*—Six months' attendance on Systematic Lectures on Midwifery, and not less than six months' attendance on Bedside Instruction in a Lying-in Hospital, or Maternity, recognised by the College. *Subjects for the Examination.*—Midwifery (not including Operations) and Nursetending. *Examination Fee.*—One Guinea.

FORM OF MIDWIFE'S LICENCE.

We, the PRESIDENT AND FELLOWS OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND, having duly examined

in Midwifery and Nursetending, and having found her to possess a competent knowledge of the same, do hereby license and authorize the said

to exercise the calling of a Midwife and Nursetender.

Communications have been received from Professor Faye (Christiana), Dr. Bantock, Dr. Graily Hewitt, Dr. Thomas Chambers, Dr. Edis, Dr. Atthill, Dr. Wiltshire, Dr. Carter, Dr. Ashburton Thompson, Dr. Jno. Dougall (his Paper shall appear soon), and Dr. Barratt.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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Original Communications.

CASES OF EPILEPSY AND HYSTERIA TREATED
WITH FREE PHOSPHORUS.

By J. ASHBURTON THOMPSON,

Fellow of the Obstetrical Society of London ; Surgeon-Accoucheur to the
Royal Maternity Charity, &c.

AT the same time that the use of free phosphorus in medicine is beginning to make some way in England, and is now acknowledged to offer a *methodus medendi* capable of affording the most surprising good results, it must be confessed that the particular diseases in which the treatment may probably prove serviceable are very ill defined. It is, therefore, as a contribution to the mass of facts which it is necessary to accumulate before venturing to enumerate specific indications for its employment, that I bring forward this group of four cases. The first is a case of infantile epilepsy, which has, as will be seen, some remarkable points about it.

CASE I.—A. B. ; female ; aged four years ; father and mother healthy. I have attended three brothers of from one to three years of age, in fatal attacks of meningitis. In one case this was ascertained by post-mortem examination to be tubercular. The patient is a stout, red-faced, coarse-haired child, of the appearance which Londoners generally consider

that of a "country child." To the educated eye she shows at once many evidences of peculiarities of nerve constitution. She talks fairly well. Was born with one tooth. Is considered to be a sharp child. In November, 1872, she had two long and severe epileptiform convulsions; in the second she presented the usual appearances. I could not detect any other evidence of disease; there had been no premonitory symptom; and she was very soon quite well again. On March 29th, 1873, she had one similar fit, which lasted fifteen minutes. As before, no warning was observed, and when the attack had passed over she seemed quite well. Twenty-five days after this she was observed to become very irritable; crying at the least provocation; picking quarrels with her brothers and sisters; sometimes sitting for ten minutes at a time, if undisturbed, staring at nothing, quite lost to what was going on around her, and flushing or turning pale at frequent intervals. On the twenty-sixth day, April 24th, she had another fit, lasting fifteen minutes. This time a little peevishness was observed to remain for a day or two afterwards. From that time to the present date, on every twenty-eighth day precisely, a return of these symptoms has been observed, with the variations hereinafter described. On May 22nd, the same sequence of events last detailed was observed. On June 17th, two days before the next fit was expected, she was brought for treatment. The premonitory flushings and absence of mind were well marked. She was, however, at the time of inspection, apparently in good health. There were no objective symptoms noticeable; but these generally disappeared under the excitement of seeing a stranger or any other small occasion. To take one thirty-sixth of a grain of phosphorus in the alcohol and glycerine mixture, every four hours. She should have had a fit on the 19th inst., but there was none; and indeed by that time she was quite well again. At the next period, July 17th, the treatment having been regularly persisted in in the mean time, there was again no fit; and the usual symptoms of nerve-disturbance lasted only two days, instead of five or six. On August 14th, September 11th, and October 9th, similar very slight

symptoms were observed ; the treatment had been intermitted on the 25th of July. On October 1st, she fell ill with measles, and experienced a very severe but uncomplicated attack which left her very weak. The November period came round before she had recovered strength ; and on the 6th of that month, without so much warning as usual, she became insensible, and was convulsed in a more violent manner than on any previous occasion. The insensibility persisted until the 11th inst., when she began to recover a little. During this time she continued in a state of clonic convulsion. The insensibility was complete. The temperature two degrees above the standard. The pulse ranged between 140 and 180, but it was at no time observed to be intermittent ; and the pupils about the third day of the attack failed to answer to the stimulus of light. There were symptoms then of meningitis and of compression of the brain, and death was very confidently predicted. However on the 12th she showed some signs of returning sensibility, and on the 13th she was quite recovered in that respect. Another week saw her as well as usual with the exception of a pain in the nape of the neck, which always attends the monthly manifestations. From that time to the present the usual symptoms of disturbance have recurred every twenty-eighth day, but in a degree distinctly greater than during and immediately after the time she was under treatment with phosphorus. She has not since been again placed under the influence of that drug.

In this case the remarkably regular return of the symptoms on every twenty-eighth day first attracts attention. The attack of March 29th may be regarded as the commencement of the series, although the next attack occurred on Thursday, April 24th—*i.e.*, two days short of twenty-eight. But this is the only exception to a manifestation of some neurosal disturbance on every fourth Thursday up to the present time. Since she had already had three consecutive monthly convulsions when placed under treatment, it is fair to attribute the intermission which then took place to the treatment commenced just before the fourth period. Not-

withstanding the occurrence of the severe attack noted on Nov. 6th, on precisely the right day, whence it might be argued that it was of the usual epileptic kind, there was no doubt that it was in fact an attack of meningitis. Acting on this view, her treatment consisted in the hourly administration of tincture of aconite and bromide of potassium in doses of half a minim and one grain respectively. The excellent result which this method affords in hydrocephalus, and which Dr. Brunton has published in the *Glasgow Medical Journal*, led to its adoption in this case.

Closely allied to epilepsy is that other neurosal condition recognised as hysteria. The following observations made on patients in whom neuralgia and hysteria were concomitantly present show such an improvement in the latter disease, while under treatment with phosphorus for the former, as appears to me to warrant a further inquiry into the power of this drug as a remedy for it.

Without venturing to attempt any definition of hysteria, it may be described as consisting in its first stage of a generally inefficient performance of the vital functions attended by general impairment of the nervous system; and very often a course of treatment not specially directed to the latter is sufficient to remedy both conditions. But at a later period, in confirmed cases, the nerve symptoms are often seen to persist in the most marked manner after it has become impossible to detect other evidence of impaired function. Under these circumstances, no indication exists which warrants the anticipation of success in treatment more from one drug than another. It is in these cases that moral influence is found pre-eminently useful; and probably cases are within the experience of every practitioner, in which recovery has been effected by this means alone, and sometimes instantaneously. The following instance illustrates the condition and the treatment referred to.

CASE II.—Some years ago I was requested to undertake the treatment of a young lady who was reported to have been bedridden and subject to fits for eighteen months. She had been under the care of various practitioners. On ex-

amination the patient was found to be a girl of eighteen years of age, well developed and stout, of good spirits and a cheerful manner ; she was said to be of an equable temperament. Menstruation had commenced two years previously, and the periods had always returned with regularity ; she had grown considerably since her confinement to bed ; she ate and slept well ; and all the other functions of the body appeared to be performed in a perfectly normal manner. But every afternoon at four o'clock precisely she had a fit, in which she appeared to be quite insensible ; the body stretched out and stiffened. There was no clonic convulsion, she did not change colour, and the pulse and respiration remained unaltered, so that at first sight the case appeared to be a pretty clear one of malingering. But there was always present at these times a very great degree of anesthesia which appeared to affect the whole surface equally. The severe pain caused by pinching the skin violently between a pair of little hair tweezers called forth a languid acknowledgment of discomfort ; but no amount of pricking with pins or pinching with the fingers or tickling elicited any sign of sensation at all. In ten minutes the fit would pass off entirely, and the patient would sit up and take her tea without at all interfering with her appetite for dinner two or three hours later. In addition the fingers and toes were always immovably flexed and had not been known to suffer extension during a year past ; and she affirmed that she could not stand on her legs. All kinds of treatment having been tried, and there being no special indications present, I determined to trust entirely to moral influence. But as a show of taking remedial measures materially lightens the heavy tax on the mental powers which this kind of treatment involves, I announced that her cure would be effected by galvanism. A trifling current from an ordinary rotatory machine was therefore passed down the spine for a few minutes on each of three days ; and having by that time obtained the confidence of the patient, I informed her that she would have no more fits ; and accordingly there were none. The galvanic machine was now thrown aside and she was persuaded that she could stand upright, and on the second

trial a push in the back obliging her to take a step or two to the nearest article of furniture for support, showed her that she *could* walk. She was now soon persuaded that she could shuffle about the room with the assistance of a chair; but for more than a week she could not be brought to dispense with it, and it became necessary to take other measures. Not to prolong this illustration unnecessarily, it may be briefly stated that, declining to call in the aid of medicine, I resorted to the stick. The patient was set up in the middle of the floor conveniently contiguous to the chairs and tables, and started to walk with a push; and she was informed that whenever she sought assistance from the furniture, the hand stretched out would become acquainted with the stick. Of course there were tears and entreaties; but it was surprising to see her rapid progress when a few bruises made it understood that there was every intention of pursuing this line of treatment seriously; and by the time the hands were sore from repeated blows the patient could walk out in the garden like other people. In short, on the twenty-second day of treatment she walked through the streets to my house without assistance and full of thanks.* It would seem in such a case as this that a habit of mind, to which general but actual disease had contributed in the first place, may be continued long after that disease has passed away, and that when all medicinal treatment has failed, it is still possible to effect cure by measures which can be supposed to act but in one manner—viz., by stimulating the nervous system and by thus rendering the mind capable of active and original exertion—capable of diverting itself from the introspective groove in which it has been confirmed by habit.

But it is not to be forgotten that to cause hysteria, as is the case in other diseases, the comparatively trivial causes in which it originates must occur in a subject predisposed to

* Indeed this kind of treatment, about which so many squeamish letters have lately appeared in one of the medical journals, is eminently adapted for all kinds of moral derangement, and not more so in boys than in girls. The young of neither sex is, happily, prone to reflection, nor does corporal punishment demand much. Women are naturally very quick of perception.

that disorder; and this fact points to some peculiarity in the nerve condition of such persons. The circumstances indicative of this predisposition appear to be an unduly irritable state of the nervous system, a want of just appreciation of the relations which should exist between externals and internals; a want in a word of self-control, which may at any moment appear as a true hysteric paroxysm, and which, if allowed to persist, terminates in a veritable paralysis of the will. But this condition is very frequently preceded and accompanied by symptoms which point to still more definite nerve derangements; by local or general anesthesia or hyperesthesia, by pains varying in situation and intensity, and which are perhaps never entirely imaginary, by sick headaches and neuralgia. The hysteric state would seem then to be one of *depression of nerve power*; and when this state of depression, which is an actual disease, has passed off, some of the symptoms to which it gave rise may be perpetuated by habit. In the latter case a moral stimulus may be found sufficient to recover the patient; but in the former—in the acuter stage of depression—this treatment alone is not permanently successful. Nor are there any known drugs which can be relied on to cure it, unless the one of which I am treating should prove to be an exception. Phosphorus may have other active properties, but it is nothing if not a stimulant, and it seems to exert that kind of power primarily over the nervous system. The association of hysteria with other neurosal symptoms, such as those last named, has come under my notice lately rather more frequently than usual; and these patients (who were being treated with phosphorus for neuralgia, and the various obscure pains which they generally complain of, and which I have been in the habit of regarding as neuralgic) have therefore been closely watched. I relate two of a series of six or seven cases in which a remarkable improvement in the general health has attended the same treatment employed with success to remove the special symptoms.

CASE II.*—C. D. is a fairly well-developed girl of sixteen

* This case was published in the course of an article on the treatment of neu-

years of age. The menses appeared first about a year and a half ago, and the function has since been performed with regularity. She is somewhat pallid ; and while she is at all times very excitable, for the last two or three months she has had a violent hysteric paroxysm once or twice a week. Her general health being pretty good, it was considered that these symptoms were due to debility consequent upon rapid growth, and advice was not sought until an attack of neuralgia supervened. It did not appear from the general information received that the pain was very severe, although the patient made a great deal of it ; and it had lasted at the time of treatment about ten days with only slight and imperfect intermissions. It affected the temporal and supra-orbital nerve branches on the left side of the head. One-twelfth of a grain of phosphorus in alcohol and glycerine was prescribed to be taken three times daily. At the third or fourth day the neuralgia disappeared and did not return ; but in addition a striking change became manifest in her general condition. She had an attack of hysterics of the usual description on the second day of treatment ; but from that time these fits ceased to occur. Her spirits began to be more equable, and her emotions more under control ; she was neither depressed at times nor boisterously merry at others ; she could laugh in moderation. The treatment, on these signs being manifested, was continued for a fortnight ; and ten weeks afterwards her mother stated that there had been no return of the old symptoms. Three months after this, or about six months from the commencement of treatment, she again complained of the hysteric feelings ; the same remedy as before was given, and the result was as satisfactory.

CASE III.—E. F. is a well-grown fresh-coloured girl of twenty, but it is obvious at a glance that she is hysterical. She had that fulness of the upper eyelid, and that entreating look about the eye which serve to diagnose hysteria without any further inquiry. Five months since her mother entered

ralgia with free phosphorus, which appeared in *The Practitioner*, July, 1873. It is related at greater length here with reference to the concurrent hysteria.

upon her fatal illness ; it lasted for two months, and during that time the patient had a great deal of very arduous duty to perform, often passing two consecutive nights without putting off her clothes. Before she was released from this occupation she began to suffer from migraine. The pain always occupied the left temporal region exclusively, and would come on suddenly. For a few minutes previous vision would be disturbed, surrounding objects became indistinct, and while large things appeared to have green spots on them, print appeared to be surrounded with red lines ; in a short time these sensations were followed by sickness, and the whole attack usually lasted some hours, only passing off after a little sleep. These attacks, which had persisted for three months, at the time of treatment, returned with tolerable regularity every other day ; and, in addition, during the latter eight or ten weeks she had had a hysteric paroxysm at least once a week. She became listless and dull, being able to talk of little but her own health ; and, having to take the position of mother to her younger brothers and sisters as far as might be, felt herself incapable of performing the duties entailed upon her. In addition to the above-named symptoms the menses returned every eighth day, and she suffered very much from flatulent dyspepsia, with irregularity of the bowels. A diet of lentil meal with milk and eggs, and abstinence from meat, with an alkaline mixture containing infusion of gentian and bismuth soon corrected the last named symptom ; but the other trouble continued. She was therefore directed to take one-third of a grain of zinc-phosphide in the form of a pill and coated (Cox) every four hours.

Fifth Day.—A bad headache.

Thirteenth Day.—Has had no headache until this morning, when, having sat up very late last night, she had what she calls "half a headache."

Fifteenth Day.—Was much upset yesterday by some domestic affair, and has quite a bad headache to-day. Menstruation.

Seventeenth Day.—Half a headache.

Twenty-fourth Day.—A bad headache. Menstruation.

Twenty-fifth Day.—With the exception of the seven days

between the fifth and thirteenth days, she can scarcely be said to show much improvement in respect of the migraine, and she is very little better as regards the hysteria. The treatment with zinc-phosphide was therefore exchanged for three doses daily of one-twelfth of a grain of phosphorus dissolved in cod-liver oil.

Thirtieth Day.—There having been no headache, she was directed to intermit the medicine.

Thirty-first Day.—Slight pain occurring, the mixture was resumed, and continued for another ten days. There was no headache during this period, nor has any been experienced since—now two months. In addition, all the hysteric symptoms have disappeared, and she says that she is so well that she scarcely knows herself. It should be observed that as the headache failed to yield to the zinc phosphide so the hysteric symptoms persisted unabated during its use; no sooner, however, was phosphorus exhibited in another form than her appearance at once altered. Her manner became cheerful; she no longer occupied the day searching out a new symptom to inform me of on the morrow; she began to interest herself again in her domestic duties, and she very shortly lost the peculiar physiognomy which I have alluded to above. In a word, in this case as in the previous, in curing the special nerve pain the general nerve condition was removed. In the last case it is not easy to estimate the importance of this happy result, for the patient came of a family in which consumption and insanity had occurred in many instances. The mother died of the former disease; the father, maniacal.

I repeat, then, that having regard to the property of nerve-stimulation which phosphorus possesses, it is reasonable to anticipate that it may prove serviceable in cases of hysteria, which are indeed cases of nerve depression; and I believe that the cases which I have thus far had the opportunity of observing, and of which the two foregoing are examples, warrant this anticipation. To find a drug absolutely remedial of hysteria is to prove in one way that that is a distinct disease; and since it is one in which, while it is widespread, and in many cases as serious as insanity itself, no medicine

hitherto known can be relied on to exhibit remedial powers, the importance of such a discovery can scarcely be over-rated, and if asserted with reason demands strict and instant inquiry into its value.

CASE OF OVARIAN DROPSY DURING PREGNANCY.

By JOHN DOUGALL, M.D., Glasgow.

ON 11th November, 1873, I was called to attend Mrs. W., aged twenty-eight, in her third labour. She had been married four years, was of medium height, slender make, and dark complexion. She was a solid, thoughtful person, and answered my questions with remarkable self-possession and intelligence. She was subject to bilious attacks but had always enjoyed fair health. Nine years ago had slight abdominal swelling, which the doctor said arose from the liver. Her previous confinements were quite favourable. Labour had begun about eight hours before my visit. The abdomen seemed unusually large, and I thought she might have twins. The os uteri was largely dilated, the head presenting in the first position, and the membranes entire. These I ruptured during the first pain, which seemed of a normal character, and after waiting some time, and labour progressing slowly, I left. In about two hours I was again summoned, and had just got to the bedside when a strong pain brought the head over the perineum, and delivery was soon accomplished. As the child (a male) was rather small and the abdomen still much enlarged, I felt through the parietes for the uterus, thinking it might contain another child, but the organ was found in the left iliac fossa, small and firmly contracted. The placenta came away easily; the binder was applied without remark, as I thought the abdominal swelling might be congenital, and if not, I concluded she would soon call my attention to it. This she did in two days, saying that after previous labours she was quite fallen, and previous to the present pregnancy quite thin. I evaded

her questions, lest she might be alarmed and recovery impeded. Since delivery urine had been several times voided without uneasiness.

On the fifth day (16th November) the case having progressed favourably, the child sucking freely, I made a minute examination of the abdomen, and diagnosed a right ovarian tumour, probably unicystic. Percussion showed dulness over the whole surface from two inches above the umbilicus, excepting over a small space extending parallel from the left iliac fossa to the lower boundary of the thorax. Palpation elicited uniform fluctuation over the dull region. The abdominal circumference was thirty-six inches, and the depth of the uterus, as indicated by the sound, three-and-a-half inches. I told the friends the nature of the case, stating that no active treatment could be resorted to in her present state, and prescribed rest and nourishing diet. I saw the patient again on the 17th and 18th, she had been out of bed, and felt so well that I ceased visiting. Four days after (22nd) her husband called, saying she was very ill. I found her lying on the back, unable to turn to either side from a severe pain a little above and to the right of the umbilicus, which had begun rather suddenly two hours before. She thought the swelling had fallen more to the thighs during the last twenty-four hours. The attendant further stated that two days before patient had passed a large quantity of urine, which she (patient) thought came from the tumour, as it had a sweetish odour. The attendant, however, considered it urine, having observed the patient had control over the voiding of it. I passed the catheter, and drew off about one ounce of urine, and then made a digital examination in the vagina, to learn whether the tumour was pointing there. It was not. Abdominal circumference increased to thirty-seven-and-a-half inches. A small relaxed portion of skin could be felt to the right of umbilicus, all around being quite tense. Very slight dyspnea, and occasional cough increasing the pain. Pulse 140; skin cool; tongue moist, slightly coated; thirst moderate; bowels normal; child to be taken from breast; turpentine stupes to

be applied over the painful part, and ℞ xv Liq. Mur. Morph. taken every four hours.

Nov. 23rd.—Saw her to-day with Prof. Leishman, who confirmed my diagnosis, and thought if she improved in two days the tumour might be tapped.

Nov. 24th.—Pain spreading to left side, but feels no pain unless she moves ; no appetite ; much thirst ; cough troublesome, and increasing the pain ; frequent eructations of flatus ; tongue slightly coated and moist ; bowels confined ; pulse 146, dicrotic.

Nov. 25th.—Feels much better ; has a craving for stimulants, which she never had before ; abdominal circumference, 38 inches ; pulse 128 ; pain quite gone. With patient turned on her right side, I made a small incision in the linea alba about one inch below the umbilicus, the point of the bistoury being smeared with olive oil saturated with benzoic acid. I then thrust a moderately sized canula and trocar smeared with the same solution through the incision, and in forty-five minutes evacuated one hundred ounces of fluid. After tapping, the abdominal circumference was 31 inches, being a reduction of seven inches, and the pulse had risen to 136. A piece of lint soaked with benzoized oil was laid over the incision, and a binder applied. Patient felt easy during the operation, and said she was much relieved by it. The fluid had a peculiar sickening putrescent odour, and resembled oatmeal gruel. Its specific gravity was 1.30, its reaction alkaline, and on heating it coagulated into a solid mass. Under the microscope it was seen to consist largely of pus, and the usual ovarian fluid corpuscles, granular débris, with a few crystals of cholesterine, and a considerable number of caudate cells, tadpole and flounder shaped.

Nov. 27th.—Feels well ; no pain ; appetite fair ; thirsty ; wound made by tapping perfectly healed ; girth of abdomen 32 inches ; respirations 20 ; pulse 120 ; temperature 100° Fahr.

Nov. 29th.—Was up previous evening for two hours, and felt refreshed ; was restless and nervous during the night ; has sudden and frequent flushes ; feels sick, and has vomited

yellow bile. Pulse 140; respirations 25; temperature 104·8°; girth of abdomen 34 inches.

Nov. 30th, 1 P.M.—Pulse 140; respirations 20; bilious vomiting; feels very sick; thirsty; features pinched; pain over umbilicus.

7 P.M.—Symptoms all exaggerated, especially the pain; great thirst; turpentine stupes to be applied, and ℞ Liq. Mur. Morph. given every four hours.

10 P.M.—Pain quite gone, but greatly depressed with sickness; thirst intense.

Dec. 1st, 3.30 A.M.—Quick jerking and sighing respiration; coffee-ground vomiting; pulse gone at wrists; hands and arms cold nearly to elbows; comatose, but easily roused; died at 5 A.M.

Autopsy at 12 noon.

The abdomen only was examined, the parietes of which were very thin. On being opened a considerable quantity of fetid gas escaped, and a large fluctuant tumour was seen occupying and distending the whole cavity. The hand being introduced between the abdominal parietes and the tumour, the latter was found much adhering to the former above the umbilicus. The omentum was also attached to the tumour. Adhesions were likewise found on the right and left side, where patient had complained of pain. All were easily separated. The mass, when isolated, had an antero-posterior circumference of 30 inches. Anteriorly it consisted of a large smooth cyst, excepting that about midway between the umbilicus and ileo-cecal valve was a budding, multicystic swelling, in shape and size like an ordinary tomato. Slightly laterally and entirely posteriorly the tumour was a shapeless nodulated spongy mass, into which the finger could be thrust with ease, causing an oozing of blood, colloidal matter, and pus. It was attached to the right ovary by a pedicle 2 inches long and 2½ inches broad. It contained 150 ounces of thin, putrid, pus-like matter. The uterus and evacuated tumour adhering were dissected out, and after washing weighed 8 lbs. The uterus was

quite healthy, and measured with the sound $3\frac{1}{2}$ inches. The left ovary and Fallopian tube were normal. No fluid was found in the peritoneum; no trace of the tapping wound was seen; nor was there any indication of the tumour pointing in the vagina. There were slight patches of ecchymosis on the peritoneum over the seat of the adhesions. The stomach, gall bladder, bowels, and urinary bladder were empty. The coffee-ground vomit under the microscope consisted of starch cells, and amorphous matter stained the colour of brandy. The only medicine given except the morphia was grs. vj Pil. Hydrarg. in two doses. The child is well and thriving.

NOTE ON THE HISTORY OF THE MENSTRUAL DECIDUA BY J. H. AVELING.

By Dr. HAUSSMANN, Berlin.

IN the OBSTETRICAL JOURNAL (tome i. No. xii. 1874), Dr. Aveling has given the history of the menstrual decidua. I published 18th June, 1867, a paper including every important memoir relating to this subject (*Monatsschrift für Geburtskunde*, xxxi. p. 1) and Dr. Aveling's communication contains no new name except that of Dr. Power. Having continued my researches, I published a more complete essay, "Die Lehre von der Decidua Menstrualis," some years after (*Beiträge zur Geburtshülfe und Gynäkologie*, Band i. 1872, p. 156-277; Band ii. p. 263, 79, als nachtrag), which showed that Denman had published his observations in 1791, and that after him John Burns had examined the same question.

Some differences of opinion existing between us relative to the historical classification of the doctrine, and as to the substances expelled from the uterus, I allude to in my exposition.

Reports of Hospital Practice.

KING'S COLLEGE HOSPITAL.

CASE OF LARGE INTRA-UTERINE FIBROID ; CURE FOLLOWING SLOUGHING.

Under the care of Dr. W. S. PLAYFAIR.

A. F., aged forty-one, unmarried, a cook and housekeeper, was admitted into the King's College Ward on December 2nd, 1873. She had been always in good health until a year previous to admission, since which time she had had profuse hemorrhage every three weeks, usually lasting eight to ten days at a time. In consequence of the repeated and excessive losses of blood she had gradually become greatly weakened and incapacitated from work. On examination a large firm tumour, ovoid in shape, and regular in outline, was found to occupy the lower and central part of the abdomen, reaching to the level of the umbilicus. Per vaginam this was made out to be uterine, the cervix being normal, and the os uteri closed. The cavity of the uterus was found by the sound to measure five and a half inches. The case was diagnosed to be a fibroid tumour of the uterus, and with the view of ascertaining its seat and relations, in the hope that it might prove to be polypoid and capable of removal, the cervix was dilated by laminaria bougies. On examining the patient under chloroform, it was found that the tumour grew from the posterior wall of the uterus, that it projected into the cavity of the uterus, and that it was perfectly sessile, and showed no signs of commencing pediculation. As his patient was becoming rapidly exhausted from hemorrhage, Dr. Playfair divided the cervix on either side, and made an incision one and a half inches in length through the centre of the tumour, in the hope that this might have the effect of reducing the hemorrhage, and lead to partial protrusion of the tumour, so that it might be eventually enucleated. This was done on the 6th of December. From that date until the 16th the patient went on

very well ; no hemorrhage had occurred in the interval. The next day she began to have an exceedingly offensive discharge, and on the 17th she passed, with great pain, a large sloughy piece of tissue, which was evidently a part of the tumour, which was sloughing and disintegrating. From that day until January 17th she passed daily similar pieces, of varying size, and on one occasion the patient was put under chloroform and as much as possible of the tumour enucleated and removed by the hand. During all this time the uterine cavity was thoroughly washed out three or four times a day with a strong solution of Condyl's fluid, to remove the excessive fetor of the discharge. No septic symptoms ever showed themselves, and on January the 23rd the patient was discharged cured, all trace of the tumour having disappeared, and the uterine cavity measuring only two and a half inches.

Dr. Playfair remarked, that when he first saw the case he hoped that it would turn out to be one of intra-uterine fibroid polypus, capable of removal with the *écraseur*. This, however, turned out not to be the case, and he resorted to incision of the cervix and of the capsule of the tumour, not only in the hope of checking the hemorrhage, which this procedure has often been found to do, but with the view of preparing the way for a future attempt at enucleation. The case was one which would not admit of mere temporising, for the hemorrhage was daily becoming worse and worse, and the patient's strength was being rapidly exhausted. The sloughing of the fibroid mass was, of course, unexpected, but it is not without precedent, and it is not difficult to understand how it should occur in structures of such low vitality. The risk was, of course, from septicemia following the presence of this large mass of decomposing tissue in the uterine cavity, and he attributed the happy issue of the case to the care that was taken to prevent this by the frequently repeated intra-uterine injections of antiseptic fluids.

CASE OF RETROFLEXION OF THE GRAVID UTERUS,
REPLACED BY MEANS OF AN AIR PESSARY.

Under the care of Dr. W. S. PLAYFAIR.

S. W., a married woman, forty-four years of age, the mother of eight children, was admitted into the King's College ward, under Dr. Playfair, on the 27th December, 1873. She has ceased to menstruate for six months, and believes herself to be pregnant. A month ago she noticed that in the morning she could only pass her water slowly and with difficulty. This symptom increased by degrees, until she was obliged to call in a practitioner, who passed a catheter every morning, until finding her water dribbling away one day, he discontinued its use. Since then she has been unable to empty her bladder, and being in great pain, applied at the Hospital for relief. On admission a large fluctuating tumour occupied the lower part of the abdomen, and reached above the umbilicus. This proved to be the distended bladder, and disappeared entirely after an immense quantity of urine had been drawn off. After this a firm swelling could be felt deep in the pelvis on palpation, which gave exceedingly well the alternate tension and relaxation which has been insisted on by Hicks as diagnostic of the pregnant uterus. Per vaginam the whole pelvis was filled by the globular mass of the retroflexed organ, and the os uteri was entirely out of reach and could not be felt. A full-sized Gariel's air pessary was introduced into the vagina at night, after the bladder had been emptied, and fully distended. The next morning the uterus was found to be in its normal position, the cervix low down and centrally placed, and all difficulty in micturition had ceased. A large-sized Hodge was introduced to keep the uterus in position, and the patient was discharged cured on the 30th of December, three days after admission.

Dr. Playfair remarked that this case was of considerable interest, inasmuch as it was the second case of retroflexion of the gravid uterus which had been in the hospital within the past few years, in which continuous pressure by a distended

air pessary in the vagina had proved effectual in relieving the accident. Dr. Barnes had quoted the former case in his work, and stated that he himself had failed in similar cases to effect reduction in this way, and he preferred the attempt to reduce the uterus at once by the hand. Dr. Playfair, therefore, was pleased to find a second opportunity of testing this plan so soon, and to have found it even more immediately successful than before, and in an uterus advanced to six months of pregnancy. He believed that it would always be preferable to give it a trial before manual reduction, for the steady long continuous pressure might, as in some cases of inverted uterus, succeed where stronger manual pressure failed, and it was certainly much less likely to prove injurious to the parts concerned.

General Correspondence.

A NEW FORM OF INTRA-UTERINE STEM.

(To the Editor of "*The Obstetrical Journal*.")

SIR,—Mr. Chambers has evoked a phantom from the depths of his consciousness, and having given to it my likeness, has belaboured it unmercifully and in unmeasured terms in the last number of your Journal. I pass over the uncharitable sentiment expressed in his first sentence, to point out that in the second he confirms to the letter my only reference to his instrument, in a sentence which was intended to be complimentary, and that in the third he directly contradicts himself. Thus, in the one he says, that it is distinctly "a modification of the late Dr. Wright's" pessary, and in the other that "it has nothing in common with Dr. Wright's, save the principle." I leave it to him to reconcile these two statements. I refer your readers to the first sentence of my paper, and leave them to judge whether his letter is not wholly uncalled for.

My paper contains no "insinuations" about Mr. Cham-

bers's stem, and my remarks as to the softening of the vulcanite have reference solely to my own instrument. I hope Mr. Chambers will allow me to state what I have *seen*. He is quite at liberty to prefer his own instrument to mine.

It was not my intention to go into the wide subject of the history of stems, whose name is legion. Nor did I think it necessary to describe the development of my instrument. I thought it enough to state that in devising it I held in view the principle of adapting it to the form of the uterine cavity and cervical canal. I think Mr. Chambers may leave Dr. Greenhalgh to look after his own interests. For, whereas the latter gentleman has several times spoken to me about my instrument, he has not even hinted at the idea of claiming it as his.

Mr. Chambers dissents from my views as to the answer to be given to Dr. T. Savage's question. I have never witnessed the expulsion of a stem by uterine contraction, except when a clot has formed around it. I hold that it is impossible for the uterus to expel a stem pessary, unless it touches the fundus, by unaided contraction. I maintain the opinion expressed in my paper, that the stem cannot be expelled in a case of anteversion, for the reason that the posterior vaginal wall acts in the same way as Dr. Wynn Williams's shield. If Mr. Chambers will watch his cases as I have mine, he will find the uterus first become retroverted. I have prevented this accident by using a retroversion pessary, in cases in which the stem has been previously expelled, and in the most troublesome case I have yet had, the difficulty has been to prevent the displacement of the uterus, and the consequent expulsion of the stem.

I am, &c.,

GEORGE GRANVILLE BANTOCK.

Cornwall-road, Westbourne Park,
May 8th, 1874.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

JUNE, 1874.

SEX IN OCCUPATION.

IT is questionable whether at any time it is right or politic for authority to interfere with or check the aspirations and actions of individuals, always premising that their desires and doings are not criminal or injurious to the public. If a man chooses to attempt to fly he should be allowed to do so, provided he takes care not to fall upon and maim or destroy his less venturesome brothers. The laws of gravitation will most certainly eventually decide the question, and bring the experimentalist to his senses or his grave. If the latter, it will not be a life altogether lost, for others will thereby be deterred from following his example, and ingenuity will be diverted into a more useful direction. Of the thousands of occupations open to the human race, it must sometimes be difficult to determine which naturally belong to women and which to men. A certain number of ladies are now in doubt upon this subject, and are anxious to ascertain how far they are capable of filling the higher intellectual positions hitherto held by gentlemen. No logical reason can be given why they should not be permitted to make the attempt. Although they have on an average four ounces less brain than men, still it is certain that some women have a larger cerebral development than many men. No just cause or impediment can therefore be urged why they should not be allowed to use the mental power they possess in any direction they please. There is in England a large surplus female population. It is said, if they were to join hands and stand in a line, they would reach from Edinburgh to London. With our present monogamous system it is impossible that all these can become what they were doubtless intended to be, the repro-

ductive servants of our race. Many of them, therefore, are not only justified in keeping their reproductive functions in abeyance, but are compelled to do so by law. Some occupation must be found for these women. If they have no children to produce, rear, and educate, no home to rule and no husband to love, they may wisely expend their brain power in some other course. At a meeting of convocation of the University of London, held last month, a majority of the gentlemen voting advised that women should be permitted to take degrees. Should the senate sanction this recommendation the learned professions will virtually be opened to the female sex, and we may expect in time to see prime ministers, bishops, judges, and physicians in ordinary to majesty in petticoats. There is, however, one reason why this anticipation is not likely to be fulfilled. Women have ever been devoid of genius, that is, of the higher creative faculties. Poets, painters, musicians, engineers, &c., are as a rule of the male sex. There are exceptions, but they can be easily counted. It is idle to attribute this to lack of education. Genius, in spite of poverty or want of instruction, seizes its owner and raises him or her high above those whose advantages have been ever so great. All ladies are taught music; yet the fact remains that our best composers are men. Cooking and dressmaking are essentially women's employments, and still the best artists in these occupations are men. Power has been equally conferred upon the sexes. How weak is man before a woman's beauty and capability of giving pleasure. Had she also been given physical strength and masculine intellect she would have been supremely dominant, excelling men in heroism, science, and art as much, and even more, than she exceeds them in numbers. Men would have been completely outwitted and outvoted by her. They are sufficiently her slaves now. What abject serfs would they not have become? Fortunately, however vigorously and persistently we may endeavour to alter the equilibrium between the sexes, it cannot be permanently destroyed. Beauty and gentleness will ever be woman's attributes, genius and strength will be man's. The veil and the fan will always be emblematic of one sex, the laurel and sword of the

other. If it were possible it would be an excellent plan to allow every man and woman to endeavour to fulfil the particular mission to which he or she feels most strongly inclined. If a man wishes to be a monthly nurse or a woman a police constable, by all means let them try. Deny them this privilege, and you create a grievance. Permit the experiment, and in a few days the question is settled. The women who are now seeking admission to masculine professions should, if they are inclined to work and pay, be permitted to prove how far they are able to compete with men. This would put an end to the ceaseless and wearying agitation that is constantly eating up thought and energy, which might be better employed. It would convince aspirants of the preposterousness and futility of their aims, or it would show that they were right in the estimate they had formed of their powers. In the latter case our national and social positions would be strengthened by a welcome accession of fresh talent and help. In the former, those who had been working in a wrong groove would find out their mistake, and learn to use their powers in a more suitable direction. There would, of course, be great and probably insuperable difficulties in carrying out this recommendation ; but we are convinced there will be no peace until it is attempted. The result of the experiment would probably show that the numbers of women who would avail themselves of the privilege would be, comparatively speaking, very small, and that those who did so would find after all that the present allotment of occupations to the sexes was not far from being the most suitable and congenial to their feelings and capabilities. When it has been determined what a woman's occupation is to be, then, and then only, can the question of her education be settled. This is but a means to an end. The woman who would love and nurture does not require the same mental training as she who would plead, preach, or practice medicine.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

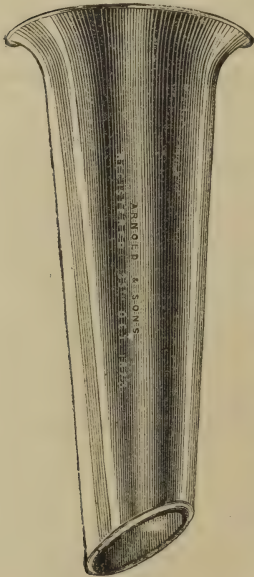
Meeting, May 6th, 1874.

E. J. TILT, M.D., *President, in the Chair.*

The report by Dr. Savage and Dr. Routh on Dr. Willing's specimen was read. The fetus was eleven inches long, nails well formed, skin pale red, hair on scalp dark in colour, cerebral convolutions and valvulæ conniventes well developed. Meconium in the intestines. Lungs with heart attached, and also in pieces, floated freely in water. Heart well formed; uterus, ovaries, and vagina well formed; eyelids non-adherent, iris well developed, pupil moderate in size, no membrana pupillaris. The age of this fetus is believed to be between the sixth and seventh month. The President called attention to the point of interest in this case—viz., that a child apparently only five-and-a-half months old cried lustily and lived forty-four hours. The report did not confirm this, the age being nearer seven than five months.

Tapering Metallic Tubular Speculum.

Dr. J. HALL DAVIS exhibited a speculum manufactured by Arnold, after Dr. Davis's design. It has a trumpet-shaped external opening, the width of the speculum gradually diminishing from this to its smaller uterine aperture. The tube is suitably bevelled off at its uterine end, the edges are carefully rounded, and when the instrument is accurately made, no groove exists where secretion could lodge. It is made in three most useful sizes, and produced in two combinations of metals—viz., one nickel plated on copper, and one silver plated on copper, and this latter, as a defence against the action of nitrate of silver, is electro-gilt also for two inches of its uterine end.



The advantage this speculum presents over Fergusson's glass silvered speculum is its non-fragility and its tapering form. The lengths vary from $5\frac{3}{4}$ inches in the largest to $5\frac{1}{8}$ inches in the smallest. The diameters of the outer opening are $2\frac{2}{3}$ in the largest, and $2\frac{1}{3}$ in the smallest. It need be replated only at long intervals at small cost.

Dr. ROUTH thought one disadvantage

would be that it would tarnish readily and would not resist the action of nitric acid, bromine acid, pernitrate of mercury, &c.

Dr. DAVIS, however, replied that this disadvantage did not exist in reality.

Dr. H. SMITH objected to the metal being turned inwards at the vaginal end, as it formed a gutter in which discharges would lodge. This would prove a great disadvantage in hospital practice, and might prove a source of infection from one patient to another.

Twin Abortion.

Dr. CLEMENT GODSON exhibited a specimen in which one embryo, five inches long, was much emaciated, and the other presented no trace of head, or upper extremity. Though apparently of no more than three months' development, they were not expelled from the uterus until $5\frac{1}{2}$ months after impregnation. There had been no opportunity of examining the placenta. In Dr. Martin's Atlas a monstrosity very similar to this was figured. He thought it an interesting question whether the development of the head and upper extremity had been suddenly arrested, or whether they had become absorbed during the time which had elapsed between the cessation of vitality and the expulsion from the uterus.

Dr. JOHN WILLIAMS remarked that the appearances presented by the upper surface of the trunk of the acephalous fetus seem to point to amputation as the cause of the malformation. Near the posterior margin of this surface and in the situation of the spinal column is a small, hard, firm projection; this appears to be continuous below with the vertebral column, and is probably the amputated extremity of it, which has remained uncovered by soft tissue. The posterior margin of this surface is somewhat raised and round, and presents much the same appearances as are found at the margin of a recently healed womb.

Dr. Godson and Dr. John Williams were requested to draw up a further report.

Dr. BARNES exhibited for Mr. Kesteven, jun., the upper portion of the trunk and head of a fetus, where the arm, face, and a foot had presented. The right hand and arm were projecting from the vagina, the left being immediately within and between them, the face presenting posteriorly, and between the pubis and the chin the left foot could be felt. Whilst preparing to turn, the child was suddenly expelled, dead. This was explained by the fact of the total deficiency of the occipital bone. Extending backwards from the head was a large soft bag, consisting of the scalp, the meninges, and the brain.

Dr. BARNES remarked that the chief point in this case was the difficulty in making a diagnosis on account of the bag supplementing the head.

Dr. H. SMITH suggested that a further report on the specimen should be presented to the Society.

The PRESIDENT requested Dr. John Williams and Dr. Godson to do so.

Dr. J. C. HAYES exhibited a carcinomatous tumour, originating, he thought, in the broad ligament, which according to some anatomists was properly recognised as an expansion of the uterus. The patient, aged between thirty and forty, was admitted in a very emaciated condition, almost moribund. No history was obtained. Post-mortem, an irregular, semi-elastic tumour, somewhat larger than the fetal head at term, was found in the right iliac fossa. The bony tissue as far back as the vertebra was superficially infiltrated with the morbid growth, which extended up between the layers of the broad ligament to within a short distance from the uterus and the ovary; these were quite intact, and the pelvic, lumbar, and inguinal glands were only slightly enlarged without being diseased. The microscopic appearances of the tumour were those of medullary cancer.

The PRESIDENT inquired in what way was the bone involved?

Dr. BARNES asked if there was any evidence of cancer in the other organs?

Dr. SAVAGE thought there was no reasonable objection to the view taken as to the cellular origin of the tumour, cancer being the offspring of cellular tissue or its allies, but might not the tumour have commenced in the bone? The uterus appeared to be free, adherent, but not involved. What was the state of the bony surface to which it so forcibly adhered? was it simply denuded, absorbed away by the pressure, or actually involved? The broad ligament, considered as a uterine prolongation or offshoot, was an idea of Rouget's, which was abandoned long ago; one might as well call the mesentery a prolongation or offshoot of the intestines. Scarcely any smooth muscle exists in the anterior layer, only in the posterior layer of the broad ligament is it found. The fibres near and about the ovary are supposed by Virchow to possess a sort of corrugating function, not dissimilar to that performed by the dartos. There are no muscular fibres in the alar ligaments. The question of gastrotomy in these cases was worth considering.

Dr. HAYES explained that the bone presented the appearance of caries, being honeycombed.

Dr. SQUAREY had seen cancer originating in the glands and extending to the broad ligament.

The PRESIDENT requested Dr. H. Smith and Dr. Squarey to report upon it.

Statistical and Practical Remarks on Consultation Midwifery in Private Practice.

Dr. E. COPEMAN, of Norwich, read a paper on this subject, limiting his remarks to consultation cases only, most of them being of an unusually severe or complicated character. The total number amounted to 216, of which 198 recovered, 18 died. A proportion of deaths to cases of 1 in 12.

There were 14 cases of craniotomy, 1 death; 10 of convulsions, 1 death; 78 cases where the vectis was employed, no deaths; 23 of version, 5 deaths; 6 of forceps, no deaths; 12 of placenta prævia, 1 death; 7 of previous separation of placenta, 2 deaths; 19 of retained or adherent placenta, 2 deaths; 28 of post-partum hemorrhage, 1 death; 7 cases of twins, 1 maternal death; 2 of ruptured uterus, 2 deaths. Craniotomy may be regarded as a safe operation, if not too long delayed. The crotchet he regards as a more or less dangerous instrument, and often very ineffective for accomplishing the object for which it is employed; he prefers the blunt hook. Twelve of the version cases were performed on account of placenta prævia. The vectis he looks upon as a most valuable and efficient instrument, succeeding even where forceps had failed, being easier of application than the forceps, less formidable in appearance to the attendants as well as to the patient, very seldom occasioning rupture of the perineum or injury to the maternal soft parts.

Dr. BARNES remarked that the great and only fault of the paper was its extreme brevity. It scarcely afforded scope for discussion, as the conditions necessitating treatment were not given. There were two points worth noting—his preference for the vectis over the forceps, and, secondly, there were two deaths from hemorrhage. This ought never to happen if local treatment were regarded as the necessary complement to other remedies, and used at the proper time. The vectis was a lever, and must remain so; it cannot be strictly speaking a tractor. We may get the head down by pressing against the pubis; however it could be substituted for the long forceps he could not understand, unless the handles were pushed into the vagina. When the head was in the pelvis anything would do to effect delivery; uterine action being set up by the irritation or interference, and the head being expelled, no tractile force was required, mere dislodgement of the head from an improper position being all that was requisite, and labour goes on at once. The vectis may do as well as the forceps in some cases where there is a want of adaptation of the head to the pelvis, but the vectis can accomplish less than the forceps, the latter being far better in most cases.

Dr. SAVAGE would have been glad to have heard more about the treatment of convulsions, but nothing was said in the paper. The results seemed unusually satisfactory. It was a pity the treatment was not given.

Dr. EDIS thought that in the cases given the vectis had been resorted to where ordinarily forceps would have been applied by most practitioners; and, indeed, the sooner forceps came to be considered as aids to labour, supplementing defective uterine expulsion by traction, in place of their application being looked upon as a formidable operation to be avoided as long as possible, the better for every one concerned.

Dr. HAMILTON, of Falkirk, had shown that the forceps may be used not only with impunity, but with manifest advantage in numbers

of instances where even now patients are allowed to exhaust their powers and expend their strength in fruitless efforts to overcome a difficulty that the forceps would remedy in a few minutes. Craniotomy would hardly be justifiable until forceps had been tried.

Dr. HAYES thought that the vectis lacks compressing force; it can only change the direction of the head; it was a question whether craniotomy had not been performed where a timely application of the forceps might have obviated the necessity. Statistics without details were practically useless.

Dr. WILTSHIRE presented to the notice of the Society a vectis procured from Dr. Copeman's instrument maker at Norwich. He (Dr. Wiltshire) stated that he had gathered from Dr. Copeman's book that he regarded the instrument strictly as a tractor, and not as a lever. It was evidently a favourite with Dr. Copeman, as shown by the large number of cases in which he had used it, and probably in his hands was more efficient and safe than it was likely to be in those of others. The edges seemed very sharp.

On the Propriety of administering Iron during Pregnancy as a Preventive of Post-partum Hemorrhage.

By Dr. BASSETT, of Birmingham.

Regarding pregnancy as nature's highest physiological work, and one that ought to go on without trespassing on the domain of pathology, he had been led to observe that those who had severe floodings during labour were uniformly out of health, weak, dyspeptic, nervous, listless, and evincing an aversion to animal food. The tone of the muscular system was impaired, and the blood in a watery condition, leading to irregular or feeble contraction of the uterus and hemorrhage as a consequence. Iron in these cases had proved, in his experience, of great service in preventing post-partum hemorrhage, combined with potash where the urine was defective, or with soda if the liver seemed to be sluggish and the skin sallow, or with hydrochloric acid if the digestion was weak.

Dr. BARNES asked if any of the Fellows had ever seen any reason to suppose that premature labour had been caused by the administration of iron? He thought we had not sufficiently ascertained the changes and diminution of vital force induced by pregnancy: a series of changes of a most important kind occurred, and if we only understood these we might preserve our patients from the consequences. As a rule, pregnant women did not place themselves under treatment. He alluded to an instance where a pupil of his had given iron to a pregnant woman, who was in consequence accused of intending to produce abortion. Dr. Barnes himself had given it in dozens of cases, and had never witnessed any ill consequences, or instances in which abortion could be traced to its administration. He thought iron might safely be given where anemia was present during pregnancy to improve the patient's condition, and lessen the risk of hemorrhage during parturition.

On a New Method of Operating for Conical Cervix and Contracted Os Uteri.

By Dr. SABOIA, of Rio Janeiro.

A silver suture was passed completely through the cervix. The wire was drawn out by means of forceps from the os uteri, divided, and the ends tied on either side and allowed to work their way out, the wire being twisted and so tightened every eight days. They remained in one month, when the remaining tissues were divided by means of a bistoury.

Dr. TILT thought that division would have been better in the ordinary way, the risk being less and the advantage greater.

Dr. EDIS concurred with the President that it was hardly worth while making such a tedious operation extending over a month when it might have been done equally well and more satisfactorily in a few minutes by a slight incision.

THE EDINBURGH OBSTETRICAL SOCIETY.

Meeting, February 25th, 1874.

Dr. J. MATTHEWS DUNCAN, *President, in the Chair.*

Report of, and Observations upon, a Case of Twins with Double Placenta Prævia (Partial), and both Children presenting Transversely—Abortion from Typhoid Fever in previous Pregnancy.

By Dr. ANGUS MACDONALD, F.R.C.P.E., F.R.S.E., Lecturer on Midwifery and Diseases of Women and Children.

Certain specialties of the following peculiar case have induced me to lay it before the Society in the form of a brief communication. The particulars of it are as follows:—

Mrs. A., residing at 3, East M—— Place, Edinburgh, was married, at the age of thirty-one, on the 17th of July, 1872. In September of the same year, whilst suffering from an ordinary attack of typhoid fever, she had a miscarriage at the middle of the second month of utero-gestation. She ceased to menstruate on the 14th of January, 1873, and all went well, so far as she could judge, with her pregnancy, till the morning of the 22nd of July last, when, on rising to pass water about 3 o'clock A.M., nearly a teacupful of blood escaped from her vagina. Alarmed at this occurrence, her husband came for me immediately, and I arrived at my patient's house at 4.30 A.M. I then found her in bed. Pulse regular and quiet, about 70 per minute, and the hemorrhage entirely stopped. The patient had experienced no pain that morning. On examination, I discovered that her abdomen was much more distended than one would have naturally expected, considering the period of the pregnancy, and I was thereby led to suspect the possibility of the presence of either twin pregnancy or of hydramnios. Examination per vaginam

was specially difficult, because the presenting part was uncommonly high, and the vagina was long and narrow. I was able to ascertain, however, that the cavity of the cervix was already obliterated, and the outer os distended to fully the size of a shilling piece. The anterior part of the lower segment of membranes presenting at the os, which part alone could at this time be reached, was *not covered* with any portion of placenta. There were occasionally slight uterine contractions, but so trifling as scarcely to attract the patient's attention. From inability to reach any portion of the placenta, or to feel any definable portion of the child, I was at first inclined to regard the case as most probably one of simple over-distension from hydramnios. The patient was, however, kept quietly in bed for a week, and an astringent mixture administered to her, as I considered it, on the whole, prudent to treat as for placenta prævia. About the same hour, on the morning of the 29th July, the bleeding recurred, while the patient was lying quietly in bed, and this time the hemorrhage was much more severe. On arriving, in obedience to summons, I found the vagina full of clots, which I removed. I then ascertained that the cervix had become dilated since I examined last time to over the size of a half-crown piece, but considerably less than that of a crown piece, but that its position was still very high up. Of the surface of the membranes thus laid bare by the dilatation of the cervix, about one-third—the left posterior third—was covered with a mass of placenta, whose free border was distinctly felt, and could be easily traced running from before backwards and inwards. A portion of the right side of the same membranous area was, at the same time, observed to be covered also with what seemed to be a mass of placenta. These masses of placenta ran into each other posteriorly. Pains were now present, slight in force, but recurring at regular intervals. There was scarcely any hemorrhage. These pains continued regular, but weak, and accompanied with occasional, but slight, bleeding throughout the day. About half-past ten o'clock P.M., however, the contractions became much more severe, and, at the same time, the hemorrhage somewhat increased. At 12.30, as the latter had now become rather severe, and the cervix was tolerably widely dilated, the presenting bag of membranes was ruptured, and the right foot of the first child, which presented transversely, was hooked down, and the breech brought to engage in the cervix. The bleeding then ceased almost entirely, whilst the pains became much more severe till the first child was expelled. It was a female, and living. The first placenta now prolapsed, and, becoming entirely separated from the second placenta, was expelled and removed. The bleeding from the remanent placenta being at this moment very serious and severe, the second bag of membranes was quickly ruptured, and a foot of the second child, which also presented transversely, pulled down, and delivery speedily effected. The second placenta quickly separated spontaneously, and there was no post-partum hemorrhage. Though the patient almost fainted at the moment of completion of the birth

of the first child, she rallied very well after the labour, and, with the exception of a somewhat anemic expression for some weeks, and a rather quick pulse for a few days, her recovery was in every way normal, and she is now quite well. The first child lived for two days. The second made only a few imperfect efforts at breathing. Both, of course, were non-viable on account of prematurity.

As the subject of the bearing of typhoid and typhus fevers on pregnancy and childbed seems to me of great importance, and to have received an insufficient amount of attention from British obstetrical physicians, I mean, at the conclusion of this paper, to offer some observations on that point of this case, but will, in the first instance, take up the main questions involved in the paper.

In the first place, I would remark that the present case is one of very great rarity, and presenting a wonderful concurrence of complexities.

We had here two placentaë presenting both at the internal os, and belonging to twins, both of which, again, presented transversely. Then we had the onset of labour at a comparatively early period of the pregnancy, apparently due to the over-distension occasioned by the twins acting in conjunction with that preternatural tendency to prematurity of onset of labour so peculiar to placenta prævia.

I have never met with a case of twins previously in which the placenta presented, and can scarcely imagine it to be otherwise than exceedingly rare. Indeed, it does not need much mathematical knowledge to prove, from the known expectancy of the individual accidents, that the probability of such an occurrence happening is exceedingly small indeed. For, granting that placenta prævia is just as common in twin as in single conceptions, since twins occur not more frequently than 1 in 89 of all cases of labour, and placenta prævia not oftener than 1 in 500 of all cases of labour, the expectation of the concurrence of twins with placenta prævia would only be 1 in 500×89 , or 1 in 44,500 cases of labour. But the expectation of the occurrence of twins with one placenta presenting at the internal os uteri must still be much greater—small though it be—than that of the accident with both placentaë presenting.

Again, taking into account the position of the two children, Kleinwächter* arrives at the result, that of all cases of twin births only in .33 per cent. do both children present transversely, or about 1 in 26,969 of all cases of labour whatever. Then, if placenta prævia occurs in only 1 in 500 of all cases of labour, the concurrence of placenta prævia with the latter peculiarity must be 500 times less frequent, or 1 in 13,484,500 of all cases; and even this must be considerably more frequent than the concurrence of both placentaë presenting with both twins lying transversely.

Leaving this matter, however, which, it must be admitted, is more curious than useful, I may be allowed to observe that the concurrence of complexities in the case led to considerable practical

* "Lehre von den Zwillingen," S. 119.

difficulty, as it rendered the diagnosis of the case at first rather obscure and troublesome.

The transverse presentation of the children made them assume a distant position with reference to the cervix uteri, and allowed of the gravitation of fluid to fill the lower uterine segment. Thereby the os was very difficult to reach by the examining finger, and it was much more than usually hard to make out exactly how matters stood. Indeed, the whole abdomen was so largely distended in comparison to the advance of the labour, that although the probability of twins, or hydramnios, or either, with placenta prævia, was before my mind, and duly considered by me, I was, on the whole, inclined, after the first examination, to believe that it might turn out to be a case of simple hydramnios after all. The fact that I felt the anterior portion of the bag of membranes, and could reach that only, and found that it was entirely bare, added to the sources of error, and rather negatived the idea that I had placenta prævia to grapple with. I confess I did not pay much attention to the decision of the question so far as the point twins or no twins was concerned, and was never certain of twins being there till after the birth of the first child. Nor do I look upon such uncertainty as of any serious importance, because it can lead to no practical injury. The accoucheur can quite well afford to wait with patience till the question is solved.

But the question as between hydramnios and placenta prævia was both more important and beset with special difficulty. So far as regarded the mode in which the hemorrhage occurred in even the first instance, everything pointed towards the greater probability of its being a case of placenta prævia. I accordingly treated the case as though it had been one of presentation of the after-birth. But, then, I had to put over against this fact, that the bleeding was not much, that it stopped at once, that I could feel a portion of the membranes through the partially dilated os the very first morning I saw my patient, and that that portion was entirely bare of placenta. The long narrow vagina, coupled with the high position of the cervix, prevented me from making a full and thorough exploration of the posterior circumference of the os, and of the lower posterior portion of the inferior segment of the uterus, else, I have no doubt, even then, I might have satisfied myself of the presence of placenta prævia. On the whole, however, I was rather inclined to believe that there was at least a chance that the bleeding might, after all, have proceeded from the rupture of some small cervical twigs through the opening up of the cervix from over-distension, probably due to hydramnios.

The second examination, with the cervix somewhat more dilated, however, revealing the well-known spongy masses of placenta on the posterior and lateral aspects of the presenting membranes, removed of course all doubt, and justified the treatment which had been adopted as the safer alternative.

As to the subsequent treatment of the case, I have really very little to say. I proceeded according to the ordinary principles of

treatment in such circumstances, which are to effect delivery as soon as possible, and as safely as possible. In pursuance of these objects, I had to hurry the labour at first somewhat, and subsequently to finish it very quickly.

So long as I could wait without any risk to the life of the mother, I delayed, so as thereby to gain room, by the natural efforts of dilatation, for the transmission of the child. The bleeding never actually became urgent till the dilatation of the lower extremity of the uterine ovoid had so far advanced as to allow of the breech being at once drawn down and brought to engage in the cervix. I thereupon ruptured the membranes, and, finding a side presenting, hooked down a leg, turned easily, and pulled the breech down. The bleeding was then practically arrested till the first child was born by the mechanical pressure of the body of the child. Then, however, the hemorrhage from the uterine surface, thus divested of this natural tampon, and laid bare by the prolapse of the first placenta, and partial separation of the second, became positively alarming, and would have undoubtedly proved suddenly fatal, had not the labour been at once terminated by the artificial delivery of the second child, the removal of the second placenta, and subsequent contraction of the uterus.

A case such as the present, had it simply been one of single presentation of the placenta, might have been expected to be a very easy one.

1. Because the presentation of the placenta was partial, and would not consequently necessitate a very large spontaneously-detaching area.

2. Because the children were both small and premature, and on that ground also might have been fairly expected to pass through a comparatively small aperture, which consequently would lead to a still smaller amount of spontaneously-detaching—*i.e.*, of bleeding area being needed.

Two peculiarities, however, removed the present case out of its normal category.

1. The fact that the presentations were transverse, preventing the descent of the head or breech, would have led to the continuation of dilatation and detachment long after the period when either head or breech would have passed the os uteri.

2. Though both placentæ reached the *edge* of the internal os *only*, yet the two masses occupied a much larger proportion of the spontaneously-detaching area than would have certainly been the case with a single placenta, with its apex at the inner os and its base on the sides of the body of the uterus; so that though the case, anatomically considered, is one of partial presentation of the placenta, yet practically it approximated in danger to the complete accident.

In speaking of the spontaneously-detaching area, as well as in discussing this subject in general, I cannot refrain from expressing my deep sense of the obligation which the obstetrical profession

owes to the President of this Society for his recent contributions to our knowledge of the laws regulating this accident.

As, no doubt, most of the members of this Society are aware, in a paper read in October last year before the Obstetrical Society of London, and published in the last Hefst of the *Archiv fur Gynäkologie*, Dr Duncan has advanced an entirely new view regarding the natural mechanism of the separation of the placenta from the uterine surface in cases of placenta prævia. In that contribution Dr. Duncan maintains, and supports by arguments, which to my mind at least seem incontestable, that the spontaneous detachment of the placenta when it presents is not due to contraction or diminution in all directions of the placental area, but to stretching of its uterine attachment through the opening of the lower segment of the uterine ovoid, to form a passage for the child.

In following out this view, Dr. Duncan has defined, more rigidly than Dr. Barnes and others who have travelled this ground before him, the exact limits of the spontaneous detaching area. According to him, the placenta, in an ordinary case of complete placenta prævia, with a full-grown child at full term, ceases to suffer any further separation when the dilatation of the lower segment of the uterus attains a diameter of 11 centimetres—*i.e.*, nearly $4\frac{1}{2}$ inches. This amount of dilatation, as the result of careful measurements made by Dr. Duncan, is shown to coincide with the circumference of a circle whose plane is at right angles to the longitudinal diameter of the uterus, and whose diameter measures 11 centimetres, whilst every part of its circumference, measured along a meridian line of the uterus, is 6 centimetres distant from the central point of the internal os uteri.

It follows, therefore, that in a case of placenta prævia such as I have been describing, if the head had presented, hemorrhage, due to separation of the placenta, would certainly have ceased some time before a segment of the spheroid, formed by the lower extremity of the uterus, with a cord of 11 centimetres, and an arc of 12 centimetres, had been obliterated by the natural dilatation.

I say *before* advisedly, because even though the case had gone on to full time, such a segment would be the maximum amount of dilatation necessary; whereas in the labour which we have been considering, the smallness of the children rendered the amount of dilatation necessary considerably under a segment with a cord of 11 centimetres.

We are thus, through the labours of Dr. Duncan, brought to such a degree of certainty, or at the very least of approximate certainty, in respect to the natural limit of bleeding in cases of placenta prævia, which is a very great advance upon the bewilderment induced by theoretical ideas regarding indefinite and indefinable zones.

But notwithstanding all that has been previously written upon this subject, and making full allowance for the above-mentioned and the three other able and more recent contributions of our President to

the *Edinburgh Medical Journal* and the *British Medical Journal*, in regard to the origin and mode of arrestment of this kind of hemorrhage, much has still to be done, as the whole subject is still enveloped in very much mist.

If I might venture a criticism upon Dr. Duncan's theory of the origin and mode of arrestment of bleeding of such cases, which has been lately put forward and ably advocated by him, it is that I think he has paid too little attention to the curling arteries as a source of such bleeding, and too much to the venous sinuses in the placental area.

Dr. T. Snow Beck, in the *OBSTETRICAL JOURNAL* for December, 1873, and January, 1874, has endeavoured to revive the views originally brought forward by Dr. F. W. Mackenzie on this subject. He maintains, supporting his arguments especially by reference to Dr. Mackenzie's experiments, that in bleeding from the uterine surface the bleeding is arterial and direct. On the other hand, Dr. Duncan would have it an indirect oozing, the arteries inside of the uterine wall bleeding first into the sinuses, and then the sinuses discharging their blood into the cavity of the uterus through its free surface. Dr. Duncan does not hold that the bleeding is regurgitant, in the sense that it is a reflux from the veins leading from the uterus towards the heart back again into the uterine sinuses.

Now, though I have not sufficiently studied this exceedingly intricate subject so as to be able to take up the strongly-affirmative position defended by Dr. T. Snow Beck, I must confess that my leanings are towards his views; and I consider the facts, experiments, and arguments advanced by him, deserve a larger amount of attention from the thoughtful accoucheur than they have as yet received. It would be a great gain if the profession thereby were only led to abandon the exceedingly unphysiological and provedly hazardous treatment of post-partum hemorrhage by means of injections of perchloride of iron, and to get free of belief in the dangerous nature of the exceedingly effective—and, as I am glad from extended experience for several years back to be able to testify, in perfect accordance with the views of Dr. T. Snow Beck—completely innocuous mode of arrestment of hemorrhage post-partum by injection of cold water into the uterus.

But this is rather departing from my subject. In reference to the course of the bleeding, I would beg to state that the late Professor Goodsir—than whom, I am sure, the members of this Society will allow, a more patient, more able, or more careful observer never lived—used in his lectures on the anatomy of the uterus to substantiate the views of Owen and of Simpson in regard to the platform arrangement of the uterine veins, and to describe the manner in which the successive platforms opened into each other obliquely, with the free edges projecting in such a manner as to act substantially as valves, and thus to prevent the escape of blood from a higher platform to a lower. I feel convinced that though it is difficult to understand

how such small vessels, numerous though they be, as the uterine curling placental arteries, may give rise to such severe bleeding, both in connexion with placenta prævia and in hemorrhage post-partum, yet the difficulties, on the other hand, to account for the arrest of hemorrhage from the open uterine sinuses without the contraction of the organ, are still more difficult to meet.

In regard to this point, I do think that the existence of some such anatomical arrangement of the veins, such as Owen and Goodsir pointed out, gets us more rationally and easily over the difficulty than to trace it to the obstruction due to a change of shape in the uterine sinuses effected in the course of the dilatation of the uterine placental area, consisting in the elongation of them in the lateral direction, and the approximation of their walls in the longitudinal direction, as Dr. Duncan urges. I do not think that Dr. Duncan, even when backed up by the great and justly respected name of Professor Tait, proves that point well. This part of Dr. Duncan's paper is to me not at all convincing.

Before such change in the shape of the discharging orifice could be effective as a hemostatic means, I feel certain that we would need a diminution of the discharging area in all directions; for I cannot imagine the mere friction of the opposed surfaces of openings, so large as those sinus openings are, to be able to resist the degree of tension, often great, to which the maternal blood in the uterine walls is subjected, both in placenta prævia and otherwise. In the case of the small curling arteries again, supposing them to be sources of hemorrhage, we have the greater contractility of their walls, the fact, also, that the separation is by tear and not by cutting, and the exceedingly small diameter of the vessels, uniting, to afford conditions specially favourable for the process of nature's hemostatics. Only in cases where the general blood-pressure was specially exalted, or in which the retentive power of the abdomen (so ably and convincingly urged by Dr. Duncan as one of the means by which the bleeding is arrested from the free surface of the uterus, in cases of placenta prævia) was defective, would the natural hemostatic means afforded by the torn surface of those arteries be expected to fail, provided we could account for occlusion of the sinuses by any certain means. That the veins inside the uterus have such an arrangement as could make their various platforms incapable of transmitting blood from a higher to a lower level is my contention, supported by the experiments of F. W. Mackenzie, and the dissections of Owen and Goodsir.

To make certain of the ground maintained by Mackenzie, T. Snow Beck and myself, however, we need extended observations and fresh dissections; and, while criticising this view of Dr. Duncan, I feel constrained to assert, that it is much easier to find fault with his, than to suggest a better explanation for the arrest of the hemorrhage. Will no one attempt to tell us why placenta prævia so very frequently gives rise to miscarriage?

Let me now draw the attention of the Society to another point of great practical value, involved in this patient's history—viz., that her previous pregnancy was interrupted by typhoid fever. The undoubted importance of this subject, as well as the great amount of uncertainty in the professional opinions regarding it, must form my apology to the Society for directing their attention to it for a few minutes.

As the patient was not then under my care, it would not be in good taste (and, besides, I have not sufficient knowledge of the course the disease ran) for me to go into the details of that occasion. Suffice it to say, that the patient aborted in the course of an attack of typhoid fever, and that, notwithstanding, she made an excellent recovery.

In so far as concerns the bearing of typhus and typhoid fevers upon the pregnant and puerperal female, I am surprised to find in the usual authoritative sources the most contradictory statements.

From what I have been able to gather, however, as well as from my own experience, I am led to affirm, in as emphatic a manner as possible, that while neither the pregnant nor the puerperal patient seem to be specially liable to these diseases, yet the researches of Hecker, Scanzoni, Wallich, Kaminsky, and others prove that pregnancy forms no protection against imbibing the poisons of typhoid or of typhus fever. It must be allowed, however, that the divergence of opinion of professional authorities on this subject is very great, and really very unintelligible. It is curious, also, to notice the gradual advance of medical opinion on this matter.

Not many years ago, it was believed that pregnancy afforded almost absolute immunity against typhoid fever. Thus Rokitsky* wrote, in the year 1842, "that pregnancy conditions an almost absolute immunity against the typhus (typhoid) process." In 1865, Niemeyer† says, in his article on typhoid fever, "Pregnant women and women giving suck are seldom seized; the puerperal state secures an almost complete immunity against abdominal typhus." In this opinion, it is right to state, however, that Niemeyer differs *in toto cœlo* from the great majority of his countrymen, as will afterwards be shown by referring to Hecker's paper. Among British authors there seems, so far as I can find out, a very great paucity of remark on the subjects, both of abdominal and exanthematic typhus, in reference to pregnancy and childbed. It would appear that no doubt had ever existed in regard to the probability of such females taking the fever, but that little attention had been given to the subject, except in reference to the probability of abortion and the probable prognosis. Dr. John Harley, in his article on Enteric Fever, in Reynolds' "System of Medicine," vol. i. p. 358, states that "abortion is almost certain to occur if a pregnant woman be attacked

* "Path. Anatomie," Band iii. S. 258.

† "Lehrbuch der Speciellen Pathologie und Therapie," 6 Aufl. 1865, Band ii. S. 578.

with enteric fever. The only two pregnant women who have come under my care aborted, the one at the third month of gestation, the other at the fifth. Both recovered well. Phlegmasia dolens is apt to be a secondary complication in such cases." In his article upon Typhus Fever, *opere citato*, p. 440, Dr. George Buchanan states, "that when pregnant women get typhus, if they are past the sixth month, they frequently miscarry; but this accident adds very little to the danger of the case, typhus fever therein differing much from typhoid or scarlatina." On the other hand, Scanzoni* mentions ten cases of typhoid fever, treated by Fingre Ritter and himself, six of whom aborted, and yet the abortion was not followed by any unfavourable turn in the course of the disease. Also, Wallichst records two well-marked cases (the one an excessively severe and complicated one) of typhoid fever in women far advanced in pregnancy. Of these, the first carried her child to the full term, the latter aborted about the beginning of the eighth month. Both patients, however, did well.

Kaminsky of Moscow published in the Russian language a work, entitled, "Contributions to the Knowledge of the Influence of Typhus and Remittent Fevers upon the Course of Pregnancy," in which he asserts that he had seen 87 cases of pregnancy complicated with typhus or remittent fever, within a year. Of these, 55 were during the first half, and 32 during the second half of pregnancy. A reference is made to a German translation of this paper, but I have been unable to obtain the work referred to. From an abstract which Wallich, *in loco citato*, gives of the paper in question, it is impossible to make out, however, what proportion of those cases were exanthematic typhus, abdominal typhus, or remittent fever.

It is evident, however, that in Russia, at least, it is no rare thing to find typhus or typhoid combined with pregnancy. In an exceedingly interesting paper, published in 1866, Hecker† maintains that abdominal typhus is very common in the Lying-in Institution of Munich, and maintains that many of these cases of fever and diarrhea during the childbed period, which, though they present no inflammatory lesion whatever, in either the uterus, its adnexa, or the abdomen, are usually regarded as mild puerperal fever, are nothing more nor less than abdominal typhus. This view he maintains with much ingenuity, and supports it further by reference to five post-mortem examinations of patients who had died of typhoid fever shortly after confinement. He maintains, in direct opposition to Niemeyer, that the lying-in period really predisposes to the reception of the poison of typhoid fever, though his *sectiones* do not help him much in the proof of that assertion, inasmuch as, according to the just criticism of Wallich, every one of these five cases, on Hecker's

* "Lehrbuch der Geburtshülfe," iv. Auflage, Band ii. S. 13.

† "Monatsschrift für Geburtskunde," Band xxx. S. 253.

‡ "Monatsschrift für Geburtskunde," ii. Band xxxv. S. 423.

own data, must have been confined whilst the fever-poison was in the system.

As corresponding with this view, but in regard to ordinary typhus, we may here quote the younger Ramsbotham,* who writes thus: "Another disease which has been confounded, in consequence of the name applied to it, with peritonitis, is a fever allied to typhus, of the most severe and aggravated form. To this the term puerperal fever would be peculiarly proper, and it might be retained, if it had not already been employed in so vague and undefined a sense. Typhus, indeed, is very rare in the puerperal state, the most uncommon, perhaps, of all the affections which have been described under this denomination. It commences at the time after delivery most usual for serious diseases to begin—about the second, third, or fourth day. It is, perhaps, ushered in by shivering, but this is by no means always the case. This is followed by pain in the head and along the spine, accompanied with great depression of spirits, mental agitation, and inquietude," &c. &c.

He afterward relates the particulars of the outbreak of what he—without, it must be confessed, any very convincing evidence—regards as an outbreak of puerperal typhus.

In the summer of 1872, I wrote my friend Dr. John A. McDougall of Galashiels to ascertain his views on the bearing of zymotic diseases upon pregnant and puerperal females; and, in a brief note in reply, he stated that he had had several cases of typhoid fever combined with pregnancy and the puerperal state, and, with one exception, they recovered. He had had two cases of typhus, and both had died. He was inclined to regard typhus as equally fatal with scarlet fever.

My own experience of either fever, in relation to pregnancy or the puerperal condition, has been small. Two and a half years ago I attended a lady who had a mild attack of typhoid fever during the fifth month of utero-gestation. Her pregnancy went on to full term, and she gave birth to a healthy boy.

In August last year, I was present in consultation at the birth of a child, at about the middle of the eighth month, which took place on the nineteenth or twentieth day of a well-marked case of typhoid fever. Both mother (who was a primipara) and her child did well.

Some years ago I attended, in conjunction with one of my dispensary pupils, a patient in 18, Greenside Row, who, after an easy labour, fevered on the third or fourth day, and whose case turned out to be one of well-marked exanthematic typhus. She recovered well, and there were in her case none of those alarming symptoms referred to by Ramsbotham.

In January, 1871, I attended a patient who was seized with a severe attack of typhus while nursing. She sank on the thirteenth

* "On Obstetric Medicine and Surgery," p. 622.

day of the fever from exhaustion, but the course of this disease was that of an ordinarily severe attack. This case is mentioned to show that exanthematic typhus occurs in women who are giving suck.

I recollect, when I was a student in the Edinburgh Infirmary, there occurred a case of typhus in which the patient aborted and died immediately after.

Indeed, from all I am able to gather from these records, I am led to believe that neither pregnancy nor the puerperal condition give any immunity against the onset of typhus or typhoid fever. Pregnant women, women in the childbed week, or women giving suck, seem to be seized with these fevers in proportion to exposure to the virus just as readily as other people.

In case a pregnant woman is seized with either of these fevers, it is undoubtedly proved that she is exceedingly liable to abort. In case of her aborting, it would appear that there are no just grounds for the opinion, that typhoid is very dangerous, and typhus not, when we look at the statistics of Hecker, Scanzoni, and others.

In case of the coexistence of pregnancy with either typhoid or typhus fever, the patients are unquestionably in considerably greater danger than if pregnancy were absent; but typhus would appear to be just about the same in risk as typhoid, neither being necessarily fatal.

In connexion with the lying-in period, both these fevers appear to be much less fatal than measles and scarlet fever.

Dr. DUNCAN inquired, as a preliminary to the discussion, whether Dr. Macdonald could give a description, however brief, of the condition of the placenta after birth.

Dr. MACDONALD said that, having had to go to another case, he had neglected to examine them.

Dr. M'RAE said Dr. Macdonald's paper was interesting and learned, but he thought he had digressed rather in introducing the subject of zymotic diseases. His not having given a description of the condition of the placenta was also a great mistake, and robbed the paper of its essence, as it were.

Dr. WILSON said, with reference to the question of zymotic disease, he thought pregnant women quite as liable to fevers as non-pregnant. He rather thought that during pregnancy, too, fevers were more fatal.

Dr. CONNELL said he had met with a case somewhat similar to Dr. Macdonald's. The first child, a very small one, he brought home by means of the forceps, the head presenting; the second, almost immediately after, by the feet. He believed this woman to have been saved by the rapidity of the delivery, for hemorrhage was great. However unable to account for the tendency to abortion in such cases, it was a beautiful provision that such a thing happened.

Dr. RITCHIE had seen one of the cases mentioned by Dr. Macdonald. Her condition when she aborted was somewhat doubtful;

in fact, she was not sure that she was pregnant until abortion took place. He rather thought the temperament of the woman might have helped to induce abortion. In other two cases he had seen the women make a good recovery after aborting, though one of them had a severe rigor the second day.

Dr. CARMICHAEL had seen five cases of pregnancy complicated with smallpox. They all aborted, some at the earlier, others at the later months. He had seen two cases of scarlatina where abortion was also occasioned. While in the Infirmary, under Dr. Sanders, he had observed that typhus rarely, if ever, caused abortion, while typhoid did.

Dr. DICKSON had a smallpox case at the sixth month. The woman went to the full time, but the child resisted vaccination.

Dr. UNDERHILL said that his personal observations had led him to support the view which he observed Schroeder held—viz., that typhus was rare, and typhoid the most common. He had had one case of typhus. It seemed that it was not so rare as Dr. Macdonald thought, to have placenta prævia with twins. Dr. Connel had mentioned one case, and he himself had met with one. The question as regards the cause of placenta prævia was an interesting one; he thought it might be due to pre-existing disease of the mucous membrane—at least this might be a predisposing cause.

Dr. BRUCE also remembered meeting with one case of this complicated with placenta prævia. Delivery occurred at the seventh month.

Dr. BELL had not heard all Dr. Macdonald's paper, but thought that portion of it which he had heard interesting. He was of opinion that in Dr. Macdonald's case the placenta were attached above what was called by Barnes, incorrectly as he thought, the dangerous zone. It was deeply to be regretted that Dr. Macdonald did not examine the mass, where it adhered and where it was not adherent. He was convinced that Dr. Macdonald's was a partial case, and that a lobe or two of the placenta merely had come down. Barnes's description was much exaggerated, for it was impossible that the placenta could become adherent to the cervix, though a lobe might gravitate below the safe locality.

Dr. DUNCAN had no facts to present as a contribution to the question of the liability or not of pregnant women to fever or abortion, or as regarded the mortality in zymotic cases. Dr. Macdonald had expended some able criticism in his paper, but he (Dr. Duncan) would not at present discuss the questions raised, nor yet reply to those objections which had been suggested with reference to his own views, and which he had but recently published. At a future time he might do so.

Dr. WILSON inquired if Dr. Macdonald thought hydramnios a frequent cause of hemorrhage.

Dr. MACDONALD replied. He said, referring to Dr. M'Rae's remark about his having digressed somewhat, that it was quite relevant

in his remarks to refer to the important question of zymotic disease ; and though he had done this, he did not think that it should have withdrawn the interest of the Fellows from the subject of placenta prævia. The question was, in fact, suggested by some points in one of the cases, and, if he needed an excuse, it was to be found in the fact that there seemed to be no little doubt, among practitioners especially, as to the fatal or non-fatal character of fevers during pregnancy. For instance, it had been said by an eminent consultant that typhoid happening during pregnancy was likely to go on all right ; but if abortion took place, the case was likely to prove fatal. As regards the cause of placenta prævia, he (Dr. Macdonald) thought the large size of the uterine cavity was a more probable cause than any disease of the mucous membrane. He agreed with Dr. Bell that the placenta could not be implanted in the cervix ; were it so, fatal results would often happen, the cervix being in a condition of paralysis. In reference to Dr. Wilson's question, he might state that he did not think hydramnios a frequent cause of hemorrhage.

THE DUBLIN OBSTETRICAL SOCIETY.

Meeting, March 14th, 1874.

LOMBE ATTHILL, M.D., *Vice-President, in the Chair.*

Discussion on the Use of Perchloride of Iron in Post-partum Hemorrhage.

Dr. MORE MADDEN said :—Mr. President,—We are, I think, indebted to Dr. Atthill and to Dr. Ringland in a twofold degree—first, for the very valuable papers they have just read ; and secondly, for the opportunity thus afforded to Dublin obstetricians of recording their experience and opinions on a subject which is now engaging such attention elsewhere. No topic could more fitly occupy the time of an Obstetrical Society than the treatment of the most serious complication of childbirth, and by no representative of the Dublin School of Midwifery could the subject have been more ably brought forward than by Dr. Atthill.

To Dr. Barnes the credit is due of having first introduced the use of the perchloride of iron into British midwifery practice, and whatever failures or fatalities may be ascribed by some to this remedy—and I, for one, am by no means prepared to assert that it is either safe or effectual in all cases—still no unprejudiced obstetrician can, I think, fail to acknowledge that Dr. Barnes has thus placed in his hands a comparatively safe, and more generally efficacious, means of arresting severe hemorrhage after parturition than any previously used for this purpose.

The question now under consideration has very recently been discussed in the *Obstetrical* and *British Medical Journals* with a degree of

warmth which appears altogether incomprehensible in what should be a dispassionate interchange of experiences and opinions between men anxious only to arrive at the truth, and concerning a question in the interests of suffering humanity in which all are intimately concerned.

On one side it is asserted that, by the injection of a solution of perchloride of iron in cases of post-partum hemorrhage, two important therapeutic indications are fulfilled—*i.e.*, first, a direct styptic effect is produced, by which the bleeding uterine vessels are sealed up; and secondly, the uterus is stimulated to permanent contraction. On the other hand, it is not only strenuously denied that either effect is produced, but, moreover, it is alleged that there is great danger of forcing the injected fluid through the patulous uterine sinuses into the circulation, or through the Fallopian tubes into the abdominal cavity—in one case causing death from embolism, or, in the other, from peritonitis. I have myself had proof that this remedy is capable of producing the curative effects described by Dr. Barnes, and I have not met with any case in it producing the effects ascribed to it by Dr. Snow Beck.

An agent capable of producing such marked effects on the organ into which it is injected as the perchloride of iron, is, however, like every other active remedy, a two-edged weapon, its powers for good or for evil depending on the manner in which it is employed. I have little hesitation in asserting that one reason at least why we do not often witness in this city the ill effects described as elsewhere so frequently following the injection of solution of perchloride of iron in hemorrhage after delivery, is, simply, that here this remedy is used, and not abused.

I regard it as a misuse of this remedy to employ it in the indiscriminate manner which appears to be now very commonly adopted—that is, “in all cases of post-partum hemorrhage, to the exclusion of all other remedies.” And I entirely agree with Dr. Snow Beck in his condemnation of this malpractice, being daily more and more convinced by enlarging experience that the observations which I made as to the use of the perchloride of iron, in the last edition of “*The Dublin Practice of Midwifery*,” published in 1871, are correct. In that work I recommended the employment of the perchloride of iron injection in cases of severe flooding, after the failure of other measures, including the administration of ergot:—“If hemorrhage continues after the means before spoken of had been tried—if firm pressure on the uterus, the external application of cold water, or cloths wrung out of iced water to the vulva over the pubis fail to check the bleeding, we must inject cold water by the vaginal syringe into the cavity of the uterus. Should this not now stop the loss of blood, we must resort to the powerful styptic recommended by Dr. Barnes—namely, the solution of the perchloride of iron, which may be added to the water injected in the proportion of one part to four parts of water. This injection acts as a direct styptic to the bleeding vessels, and as a

stimulant to excite uterine contraction.”* Now, when I remember the tone in which my recommendation to use the perchloride of iron, *after* any remedy, was spoken of by one of the reviewers of that book, I feel some satisfaction in finding that the value of perchloride of iron, as defined by myself at a time when most exaggerated views were taken of its applicability in all cases of uterine hemorrhage, is, after an interval of some years, during which a no less exaggerated reaction against its use been led by some eminent practitioners, now generally adopted in almost my words. In truth, hemorrhage after childbirth so severe as to require the use of perchloride of iron, is, where delivery has been properly conducted, I believe, a very rare accident. Even in cases of women who have been previously subject to post-partum hemorrhage, if due attention be paid to the duration of the second stage of labour, the physiological duration of which can neither be abridged nor prolonged with safety, if ergot be given when the child's head begins to press on the perineum, and, above all, if due care be taken to secure and maintain an efficient contraction of the uterus by the steady and increasing pressure of the accoucheur's hand over the fundus as the child's body is expelled—a pressure not to be relaxed till permanent contraction is securely effected—if these precautions be taken we shall have comparatively few opportunities of using perchloride of iron in post-partum hemorrhage.

The cases recently reported by Dr. Snow Beck in the *Obstetrical and British Medical Journals* do not, I think, sustain his views as to the danger of injecting solution of perchloride of iron, as only in one† does death appear to have been in any way connected with the use of the styptic injection, being evidently cases—one of pyemia, and the other of the typhoid form of puerperal fever. In reference to these instances in which patients, in whose cases the perchloride of iron was used to arrest hemorrhage, died from twenty to forty days afterwards of pyemia or other diseases, I would venture to observe that it is not altogether impossible that if the flooding had not been thus arrested, the patients might have died of hemorrhage; nor, as far as my experience goes, are deaths from pyemia, or metro-peritonitis, or embolism, or puerperal fever, confined to cases in which the perchloride of iron has been used.

As this question is one which must be decided by experience rather than by argument, I shall now submit the following notes (very hurriedly thrown together only this day) of all the cases of severe hemorrhage after delivery in which I had seen the perchloride of iron tried in my private practice from January 1st, 1870, to the present time. Of these cases—ten in all—seven occurred in my own practice and three were seen in consultation. In nine the hemorrhage was

* “The Dublin Practice of Midwifery.” Edited by Dr. Thomas More Madden, Senior Assistant-Physician, Rotunda Lying-in Hospital, p. 189. London. 1871.

† *Obstetrical Journal*, February, 1870.

effectually arrested by the perchloride of iron after the failure of other remedies ; and in one it failed completely. In seven instances the patients recovered perfectly ; in three cases the patients died. But I believe the result in these cases had no connexion with the use of the styptic, as in one case death resulted from typhoid pneumonia ; in another from secondary hemorrhage in the course of small-pox ; and the third from what I believe to have been embolism. The last case is one in which Dr. Snow Beck and those who adopt his views on this subject would, I presume, ascribe the fatal termination to the use of the perchloride of iron. But yet this opinion would not, I think, be justified by the facts of the case. For we know that cases of sudden death resulting from embolism, as this clearly was, occurring after delivery, are unfortunately not rare. I have myself reported no less than three such cases, which occurred whilst I was connected with the Lying-in Hospital, and in which no perchloride of iron was used ; and these cases are most common after hemorrhage.

CASE I.—January 21st, 1870, I delivered, by my short forceps, Mrs. C., aged thirty, wife of an officer stationed in the Royal Barracks, Dublin, of a large female living child, her third, after a difficult labour of thirteen hours. She had suffered from severe flooding after her previous labour, and, therefore, as soon as the head entered the pelvic cavity I administered ergot. There was a smart dash of hemorrhage, however, after the expulsion of the placenta, which was at once restrained by the injection of the diluted solution of perchloride of iron, after which the uterus contracted firmly, and she made a good recovery.

CASE II.—Mrs. B., aged forty, first pregnancy, delivered by my short forceps of a posthumous small living child, after a difficult labour of about thirty hours, being a considerable time under chloroform. She was in a most distressing condition at the time, having recently lost her husband, and, immediately after the completion of labour, was attacked by profuse flooding—saturating the bed—and all the ordinary methods of arresting this were resorted to, but none appeared to have any influence in stopping it ; on the injection of the solution of perchloride of iron, the bleeding was at last checked, but not till she appeared completely exhausted. A few days later she was attacked by hysterical mania, and subsequently by the typhoid form of puerperal fever, during the course of which I had the advantage of the assistance of Dr. Hayden in consultation, she being the subject of the most malignant type of puerperal blood-poisoning. Nevertheless, she made a complete recovery after an illness of over two months.

CASE III.—Mrs. B., a somewhat delicate-looking lady, aged thirty-two, who had had one living child about five years previously, and had, since then, eight miscarriages, generally from the second to the

third month, each being accompanied by considerable hemorrhage ; first consulted me in December, 1871, when I found she was suffering from complete retroversion of the uterus ; this was replaced, and a Hodge's pessary adjusted. She continued to wear a pessary till March, when she became pregnant, and there being no displacement, the pessary was removed ; about six months later I was sent for, and found her suffering from bearing-down pains, retention of urine, and tenesmus ; and, on examination, found the uterus again completely retroverted. Dr. Kidd now saw her in consultation with me, the displacement was rectified, and a large Hodge's pessary applied. She was kept in bed till after the fifth month, when all danger of displacement being over, the pessary was removed, and she was ordered to the sea-side, where she remained in excellent health during the autumn.

On January 23rd, 1873, labour began at 8.45 A.M., the head entered the pelvic cavity at 9.30, and the child, a very large girl, was born at 10.45 A.M. ; the placenta followed in fifteen minutes. As she had suffered from severe hemorrhage after the former labour, on the present occasion I administered a drachm of ergot as soon as the head was on the perineum, and one immediately after the birth. Nevertheless, ten minutes after the expulsion of the placenta, which, I need not say, was not hastened in any way, very copious flooding set in and lasted for upwards of three-quarters of an hour, during which all the ordinary measures were, of course, employed. The patient became pulseless and faint, and ultimately the profuse discharge of blood was arrested by the long-continued injection of the solution of perchloride of iron. Still, though the uterus was now pretty fairly contracted, there was yet a constant and seemingly irrepressible draining of light red blood from the uterus—a very alarming circumstance, as her condition was that of almost complete collapse from the loss of blood. This draining was, however, at last stopped, the jactitation ceased, and her pulse returned, after she was tightly bound up, by the free administration of brandy and opium.

She went on favourably till the seventh day, when she had a severe rigor. The following day all the symptoms of metritis showed themselves. During the inflammation I leeches her, and afterwards, when the disease assumed a typhoid type, I supported her strength by brandy, champagne, nutrient enemata, &c. The uterine symptoms gradually improved, and during their continuance Drs. Denham and Kidd, and, subsequently, Sir Dominic Corrigan, saw her with me. However, after the complete subsidence of all the uterine symptoms, she was attacked by a low typhoid pneumonia, of which she died on the twenty-first day after her confinement.

CASE IV.—Mrs. S., aged twenty-two, second pregnancy, was delivered, by the natural efforts, at 3.30 A.M., April 6th, 1870, of a very large female child, after a labour of only six hours. The placenta followed in ten minutes. She had had considerable post-

partum hemorrhage after the first labour—fifteen months previously—and therefore I gave her two doses of ergot before the birth of the child and one immediately afterwards. Notwithstanding this the hemorrhage set in immediately after the expulsion of the placenta, and continued to a most alarming extent, and for upwards of two hours, during which the uterus alternately contracted and relaxed. The woman became exsanguine, pulseless, and almost moribund before the flooding was permanently arrested. All the ordinary means being, of course, meanwhile resorted to; the child was placed to the breast; firm pressure maintained over the uterus; the hand was introduced into its cavity, repeated injections of cold water, and of the solution of perchloride of iron were thrown up, and enemata of brandy and beef-tea administered. At last, however, the hemorrhage ceased, the uterus contracted sufficiently, and she recovered; her convalescence being, however, very slow. In this case I am unable to say which of the various remedies employed had the effect of arresting the hemorrhage, though I believe that the credit is due to the combined action of all rather than to the influence of any one.

CASE V.—Mrs. L., aged twenty-four, was delivered of her second child, a male, June 28th, 1872. I had attended her in her first confinement, which was natural, a year before, but on this occasion she was upwards of twelve hours in the second stage, from want of uterine action, and I was ultimately obliged to deliver her by the forceps. On the day before delivery she became gradually covered with the marked eruption of small-pox, which was then epidemic in Dublin. After delivery there was no serious hemorrhage, but on the eighth day after her confinement, I was hastily summoned at 3 A.M., and found her almost moribund from secondary hemorrhage, by which the bed and bedding were completely saturated when I arrived—a quarter of an hour after I was first called. I administered stimulants largely, and at once threw up a pint of diluted solution of perchloride of iron into the uterus; this produced little or no effect, and was repeated as uselessly, and within an hour she sank and died.

CASE VI.—I was sent for, in consultation, by Dr. Boyle, of Rathgar, to see a lady residing some distance from town. She had been for some hours in the second stage of labour; the cord was prolapsed, and we delivered her by the short forceps. There being some hemorrhage between the birth of the child and the placenta, which was morbidly adherent, I introduced my hand to remove it, and found a large sessile tumour growing from the fundus uteri. The removal of the placenta was followed by severe post-partum hemorrhage, which was completely arrested by the injection of solution of perchloride of iron. The patient convalesced favourably.

CASE VII.—Mrs. T., fourth pregnancy, was delivered March 21st,

1871, of a healthy living child, by Dr. Wyse, with whom I subsequently saw her, in consultation. After the expulsion of the placenta, the uterus relaxed and profuse flooding set in, which we arrested by the injection of the solution of perchloride of iron. I afterwards learned from Dr. Wyse that her recovery was perfectly satisfactory.

CASE VIII.—Mrs. S., an English lady, aged thirty-two, was delivered of her eighth child, a male, January 4th, 1872, after a labour protracted in the second stage by inertia of the uterus; the placenta was expelled in twenty-five minutes, after which very persistent and alarming hemorrhage set in; this resisted all other treatment, and was at last arrested by the use of repeated injections of the solution of perchloride of iron, together with enemata, brandy, beef-tea, and tincture of opium. I have since attended this lady without any recurrence of the hemorrhage.

CASE IX.—Mrs. B., aged twenty-six, was delivered, by the natural efforts, of a still-born female child, after a tedious labour, being about seven hours in the second stage. She had suffered from post-partum hemorrhage after her first confinement, and on the present occasion had had a good deal of hemorrhage during the first stage, which I checked by rupturing the membranes. Immediately after the completion of the third stage the hemorrhage returned to a very considerable extent, and was arrested only by the perchloride of iron injection. Her recovery was rapid and complete.

CASE X.—Mrs. P., third pregnancy, was delivered, by a midwife, July 14th, at three in the afternoon, of a living female child. The placenta was retained, and considerable hemorrhage following all the nurse's efforts to expel it, I was sent for, three and a half hours later. On introducing my hand I found it extensively morbidly adherent to the fundus uteri and removed it; shortly afterwards severe hemorrhage took place; ergot and cold failing, the perchloride of iron solution was injected, the bleeding was stopped and the patient recovered well.

I have now briefly related all the cases, favourable and unfavourable, in which I have used the perchloride of iron, and I trust that the Society will agree with me in considering that these cases are, on the whole, in favour of the employment of this remedy in some cases of post-partum hemorrhage which resist all other treatment.

Dr. M'CLINTOCK said, that although the subject of the use of perchloride of iron in the treatment of post-partum hemorrhage had come under the notice of the Society in a paper read about four years ago by Dr. Roe, still it did not attract the full attention and discussion which the importance of the question demanded; nor had the subject then attained the great proportions which it now assumed, when, so far as regards obstetric practice, it might be looked upon as the pro-

minent subject of the day. It came very appropriately before the Society now, inasmuch as at a very recent meeting the subject of the *preventive* treatment of hemorrhage had engaged its attention, and been fully discussed. He believed Dr. Barnes had not said too much for the use of the perchloride of iron when he called it a "new power," placed in the hands of the obstetrician for the arrest of post-partum hemorrhage. They already possessed three or four powerful remedies for the suppression of uterine hemorrhage. One was ergot, another was cold, and another was manipulation of the uterus, whether externally or internally. The last was a most powerful agency, and he thought the remedial value of this internal manipulation had been somewhat overlooked of late years. There was a fourth agent employed occasionally, very powerful and influential, but, from its nature, almost excluded from clinical use—viz., some form of electricity. With regard to the use of the perchloride, there were three practical questions to be considered. One was its feasibility. Electricity was a very powerful agent no doubt, but in practice it was not feasible, for no man went to a midwifery case with an electric machine in his pocket, and if hemorrhage suddenly came on there would be no time to send for one. Now, the use of the perchloride of iron was quite feasible; it occupied little or no space in the midwifery bag, and did not require any special instrument for its administration, which could be very easily effected. The next question was as to the *efficacy* of the perchloride in restraining the hemorrhage, and he thought there could be little doubt about its power to produce coagulation in the mouths of the vessels, and also to induce contraction of the womb, which was the great means whereby hemorrhage from the uterus was to be controlled. The third question concerned its safety. He agreed with what had fallen from Dr. Atthill and Dr. Ringland on this subject. It was very well known that women who had suffered a severe loss of blood in parturition were peculiarly exposed to some form of septicemia, or peritoneal inflammation. Now, in those cases where there had been enormous flooding, if the use of perchloride of iron was followed by peritonitis, it would be hardly fair to set it down to the action of the styptic. The only case he knew where he thought that death could be fairly attributed to the use of the iron injection was one narrated before the Obstetrical Society of London, by Dr. Bantock, where the iron was used, not to stop hemorrhage, but to prevent it. Its employment was immediately followed by most intense pain, which continued until the patient's death, a few hours afterwards. It was possible that in this case some of the fluid had escaped into the peritoneal cavity. In the other cases, where the injection was followed by different forms of septicemia, or inflammation, he did not think it fair to set it down exclusively to the iron. There had been a good deal of difference as to the strength of the solution used by Dr. Barnes and other practitioners. He (Dr. M'Clintock) used a solution of about the same degree of strength as the liquor ferri perchloridi of the Pharmacopeia,

which was a stronger solution than that usually employed. In Dr. Ringland's cases it was the solid perchloride that was used, carried by the hand into the cavity of the uterus, and rubbed over the bleeding surface. He (Dr. M'Clintock) did not think that these cases ought to be placed in the same category with those where the perchloride solution was simply injected into the uterus. It might be well contended, that the arrest of the hemorrhage in Dr. Ringland's cases was due to the powerfully stimulating action of the hand on the uterus. The utility of the introduction of the hand into the uterus and the effect it was capable of exciting as a remedy for hemorrhage was too often forgotten. Dr. Collins, in his practical treatise on Midwifery, had laid the greatest stress on its value as a mode of exciting uterine contraction in these cases of post-partum hemorrhage. With regard to the administration of the perchloride injection, he attached importance to two points—viz., to carry the point of the tube well up to the fundus of the uterus, and to have the uterine cavity as free from blood as possible, so as to insure the styptic fluid coming in contact with the interior surface of the organ. In his own practice he had employed this remedy in four cases: in *three* it was completely successful in stopping the hemorrhage; and in one it failed, though twice resorted to, and the lady died of hemorrhage. Symptoms of metro-peritonitis ensued in one of the cases, but yielded to the treatment employed, and the patient recovered. This was a case of *placenta prævia*, in which he had to deliver the child by turning, but the patient sustained an enormous loss before this was effected. The recurrence of hemorrhage after the extension of the placenta necessitated an immediate resort to the styptic injection, and its immediate good effects were very striking, though it was followed by very severe pain in the belly. In one of his cases the hemorrhage followed abortion about the fourth or fifth month, and could not be restrained by the most careful plugging of the vagina. Here also the perchloride injection was successfully used, and without any unpleasant effect. On several occasions where much or prolonged bleeding followed upon miscarriage, he had found good results from mopping the interior of the uterus with the perchloride solution.

Dr. MACSWINEY said the practice of the injection of the perchloride had been objected to as being very dangerous; as being uncalled for, inasmuch as the alarming consequences for which it was proposed as a remedy were capable of being met and combated by other means; and, finally, it was said that it was not in all instances successful. It appeared to him that the advocate of this remedy must be in a position to show, firstly, that it was not a dangerous remedy, and that it was efficacious; secondly, that in those dreadful cases of hemorrhage where the life of the woman was ebbing away, death would in all human probability occur, if the hemorrhage were not rapidly stopped; and finally it must be shown that there was no other mode of treatment capable of affording speedy and permanent contraction of the uterus. It was for the Society to say how far these

propositions were demonstrated by Dr. Atthill or not. In his (Dr. MacSwiney's) opinion he went very far towards proving the position he took up. It was desirable, in a practical point of view, that some satisfactory conclusion should be arrived at as to the respective value of the liquid or of the solid preparation of the perchloride of iron. Very satisfactory effects were shown by Dr. Ringland to have followed the application of the solid perchloride to the surface of the uterus, and one of the reasons assigned for preferring it to the solution was, that it obviated the danger of its entrance into the sinuses or the Fallopian tubes. On the other hand, the use of the solid perchloride necessitated the introduction of the hand, and it was a moot point whether it was safe or desirable to introduce the hand into the uterus. The late Dr. Johnson, Dr. Churchill, and Dr. Atthill disapproved of the introduction of the hand; whilst he gleaned from Dr. M'Clintock's observations that he approved of the practice, which was also sanctioned by Dr. Collins. He (Dr. MacSwiney) had a case where it became necessary to withdraw the placenta, in a case of *placenta prævia*. Dr. Churchill sanctioned the introduction of the hand in that instance, and the child was delivered. In three days afterwards metritis occurred, and the woman died, and Dr. Churchill observed—"So much for introducing the hand into the uterus." Case No. III. of Dr. Atthill's cases went on well till the tenth day, when the patient had a rigor, and died on the fifteenth day of peritonitis. It might be fairly said that that death should be set down to the use of the perchloride. Another circumstance mentioned by Dr. Atthill was, that all his patients were anemic persons, and he suggested that their blood was not sufficiently charged with fibrin. It might be a matter of great importance to ascertain how far Dr. Atthill was right in this view, and he should like to ask whether any member of the Society had ascertained, when dealing with any of these cases, what was the condition of the urine as regards the presence of albumen, carbonate of ammonia, &c. He could quite understand how the blood being in an unhealthy condition would have a greater tendency to exude than if it were healthy. Cases had been recorded of very severe hemorrhage where the woman had convulsions with, it might be presumed, albuminous urine before parturition ensued. He never saw a death from post-partum hemorrhage, or from the injection of the perchloride of iron into the uterus. The only case in which he used the perchloride was one of dangerous and profuse menorrhagia—so profuse as to lead to the belief that the lady was about to die from loss of blood. In that case, having to go to the country to see the patient, he took a bottle of the solution with him, and introducing the nozzle of a syringe above the patulous os of an enlarged uterus, he passed in the solution with the effect of arresting the hemorrhage. In all the cases of post-partum hemorrhage he had seen the patients were of a most weak, lax, and anemic appearance. In each of these cases he used nitric acid as a test for albumen in the urine, but did not find it. He

thought the patients would have died, the hemorrhage was so great. He did use persevering friction, pressure over the uterus, cold water, and in one case ice and brandy to a large amount. He gave brandy in large quantities repeatedly in one case, and he was sure the lady was under the influence of alcoholic stimulant after she recovered from the danger of death by hemorrhage.

Dr. RINGLAND thought it was the duty of every member of the Society, when such an important discussion was going on, to give the results of any experience he might have had. He would therefore make some observations on the question, although he had at first intended to take no part in the discussion on account of his near relationship to the author of one of the papers. Before entering on the subject itself, he should state that he had had occasion in five cases in private practice to employ the perchloride of iron. In three of those cases he used the fluid, and in two the solid perchloride, and had therefore had an opportunity of contrasting the action of the two preparations. One of those cases he had had the honour of submitting to the Society, wherein the drug failed to produce the desired effect, and he had then recourse to transfusion, and in that case there was complete recovery. In another case, in which the fluid preparation was used, there was no bad symptom. The third case terminated fatally. In that case, within a few hours after the introduction of the fluid preparation (which was effectual in arresting the hemorrhage) hysteria was established, it spread to peritonitis, and the lady was in imminent danger. After a few days she relapsed into a low fever, and died thirty-one days after her confinement. He believed the employment of the drug was the cause of the fatal effect, but the patient was of a low constitutional habit, thin blood, and had been weakened by considerable hemorrhage. In the remaining two cases he used the solid perchloride, and in both those cases the recovery was steadily maintained from the commencement. The first question that suggested itself was—Were they justified in employing the drug? To answer this two other questions must first be determined—Was it efficacious for the purpose for which it was employed? and, was it comparatively safe? As to the efficacy of the drug, it appeared that in the 44 or 45 cases which had been submitted to them it failed but in 1 in producing the restraint of the hemorrhage; and in that case Dr. M'Clintock stated that the non-efficacy of the drug arose from the omission to empty the uterus of the blood, so that the drug was prevented from coming into contact with the uterus. Two other cases were referred to in which transfusion was subsequently employed; but it must be borne in mind that in those cases the restraint of the hemorrhage was produced, so that, in fact, it failed but in 1 case out of 45. As to the next question—Was it comparatively safe? In Dr. Atthill's practice there had been 1 death; in Dr. Hill Ringland's, 6; in his own, 3; and in Dr. M'Clintock's, 1; making in all, 11; but he thought these deaths could not be fairly attributed to the use of the drug, with the excep-

tion of one case to which he referred himself, and one case mentioned in Dr. Atthill's paper. But although they might have this considerable mortality in cases of post-partum hemorrhage where the perchloride of iron was used, they must consider how many more deaths they would have had if the drug had not been employed. He could say, as far as his experience in the Coombe Hospital had gone, that a large proportion of those cases would have terminated fatally but for the employment of the drug. As to the comparative value of the solid and fluid preparations, he believed there was a danger of the fluid being absorbed through the sinuses or passing through the Fallopian tubes. He believed the fatal case he had referred to was attributable to one of these causes. The solid drug was free from all danger of this kind, and if there was a certain degree of fatality attending one preparation and not the other, they must give the preference to the method which was unaccompanied by risk. With respect to the introduction of the hand into the womb, it must be remembered that Dr. Hill Ringland mentioned that he had employed every ordinary remedy for the arrest of the hemorrhage prior to using the drug. Speaking from his own experience, the introduction of the hand was not an unusual practice in the Coombe Hospital; but they knew it was only to be employed after the ordinary means had failed, and in such cases the introduction of the solid perchloride had been attended with success. There was only one other point on which he wished to say a few words, and that was with respect to Dr. Atthill's view as to vomiting in cases of post-partum hemorrhage. Dr. Atthill appeared to think vomiting one of the most dangerous symptoms that could threaten the patient. His (Dr. Ringland's) experience differed in some respects from that of his friend. He recollected the first case of vomiting following hemorrhage that occurred in his experience, and remembered the terror that accompanied that event, but he also recollected the valuable effect it had in contracting the uterus. He believed vomiting was a powerful agent in stopping hemorrhage. This might arise from the vascular sympathy that existed between the uterus and the stomach. He had seen firm contraction of the uterus occur after vomiting, and so strongly did he feel this that he invariably used common mustard as an emetic, and had seen it cause an immediate effect in producing uterine contraction and stopping hemorrhage.

Dr. ATTHILL explained that he had not said vomiting was a dangerous symptom, but that ergot often caused vomiting, and therefore could not, in such cases, produce its specific effect.

Dr. M'CLINTOCK said he wished to make a remark, by way of explanation. He was afraid, from what had fallen from Dr. MacSwiney, that the remarks he (Dr. M'Clintock) had made on the use of the hand within the uterine cavity might be misapprehended. He did not say the introduction of the hand was free of danger. It was a proceeding he had seldom adopted himself, not more than on two or three occasions in his life. Dr. Charles Johnson, under whom he

had acquired a great deal of his obstetric experience, was extremely averse to the introduction of the hand into the uterus after delivery. He had never seen it practised in the Lying-in Hospital when he was an assistant under that gentleman, but he fully admitted it was a most powerful stimulant to the uterus. It produced much pain, and he thought was attended with a good deal of danger, so that it should not, he thought, be resorted to, except under pressing circumstances.

Dr. HENRY KENNEDY said he believed, if any bad results followed the use of the drug in the solid form, they would follow immediately. There were a large number of cases in which, though death occurred, the bad symptoms did not appear until some time after the use of the perchloride of iron. It might be a question for discussion whether the drug had anything to do with the fatal result in these cases.

Dr. DARBY said the first case he saw of the use of the drug was that of a lady who had miscarried at the third month. She was in a delicate state of health. He asked Dr. M'Clintock to see her, and that gentleman injected perchloride of iron into the womb, with a successful result. He (Dr. Darby) subsequently introduced the perchloride in two cases of miscarriage, with good effects. He used it only once in post-partum hemorrhage, and it arrested the hemorrhage immediately. When a practitioner was called on to act in a case of post-partum hemorrhage, it was his duty to do what he thought best. A woman was bleeding to death, and the attendant stopped the hemorrhage as quickly as he could; and he would not hesitate, from what he had seen, to use the injection. He doubted very much whether absorption into the sinuses of the uterus ever took place. It might possibly produce inflammation, but he doubted that it could get into the Fallopian tubes. He did not think the fatal result in the case referred to by Dr. Ringland was caused by absorption, but would rather attribute it to inflammation caused by the application of the drug to the surface of the uterus. He preferred the use of the fluid preparation, believing that it was more likely to come into contact with the bleeding surface, whereas it was a mere chance whether they could get the solid perchloride into contact with the bleeding vessels.

The PRESIDENT wished it to be distinctly understood that, although, as they were aware, he was not adverse to the introduction of any improved system of treatment that might be applied to the present or any other branch of obstetrics brought before the Society, yet he must warn them that it was very hard to teach an old dog tricks. It appeared to him that one of the chief advantages of having an experienced man in the chair was, that, in case of novelties being introduced, it was for that man to give his opinion honestly and fairly on the merits of any novel practice that might be brought forward; more especially by contrasting its advantages and disadvantages with those confirmed, in his own mind, by his own experience, as well as by the experience of his predecessors and contemporaries. At the same time it was equally his duty to warn them that, whilst on the

one hand they were liable to fall into error by hastily grasping at every novelty that might spring up, on the other hand they should bear in mind that the greatest obstacle to the progress of knowledge was scientific incredulity, and the inveterate conviction, on the part of those claiming to be men of experience, that their knowledge could not be improved upon. With this prelude he asked them to take at its value what he was going to say. He could look back for a long time of hospital and of private practice in the treatment of hemorrhage, and, having refreshed his memory by reference to his notes, he could not bring to mind a case of fatal hemorrhage in his private practice but one, and that was in the wife of a medical man. He thought, therefore, the alarm which had been got up on the subject as to its frequency, at least in private practice, was unfounded. The President added that he had little doubt the judicious rules laid down for securing the contraction of the uterus by the late Dr. Joseph Clarke, and insisted upon by Dr. Collins, had much to do with the infrequency of post-partum hemorrhage, and if persisted in would lessen these cases. Be that as it may, it came to this, that whatever system was in practice to check hemorrhage in his time, must have been such that the risk was not so great as was now supposed, and that it must have been effectual in preventing hemorrhage. He hailed with pleasure every effort to add to our resources, but he apprehended the result of a rush upon this plan of treatment—a treatment, in his opinion, not unattended with risk, for if every man who met with a dash of hemorrhage resorted to the use of this styptic, to the neglect of the tried and hitherto successful modes of treatment, the consequences might be most deplorable. It had been stated by Dr. Ringland that out of forty-five cases brought before this Society, treated by perchloride of iron, eleven, or one-fourth, had terminated fatally. He had no hesitation in saying that that was a large proportion of fatalities in hemorrhage. What were the causes of hemorrhage after delivery? Imperfect and irregular contraction of the uterus, and morbid adhesions of the placenta to the uterus. The want of contraction was the main cause. In morbid adhesions there was an altered state of the parts that prevented its efficient contraction, at least where the diseased placental structure had adhered; and in the other case there was imperfect action. The object, then, was to cause the vessels to contract, and generally this was effected by grasping the uterus, following down its contraction by pressure, padding, and bandaging, and by not too rapidly extracting the placenta where this is still retained. In 99 out of 100 cases, this proceeding would be found effectual. But where the circular fibres contracted, and there was a chamber locked up above, how could any styptic applied prevent the hemorrhage? It was possible to account for the efficacy of the styptic where there were altered structures from morbid adhesions, or where there was anemic inaction. The nature of each case would, perhaps, eventually determine the treatment. A great deal had been said as to the risk consequent on the intro-

duction of the hand. He agreed with Dr. M'Clintock in thinking the practice not justifiable except the conclusion was arrived at that the hemorrhage could not be otherwise controlled. In such a case it was clearly justifiable, and there was no difficulty about it. He had been obliged in some instances to keep his hand in the uterus for twenty or even forty minutes, and he believed if he had withdrawn his hand life would have been lost. If they had a case of hour-glass contraction to deal with before or after the expulsion of the placenta, the proper course was to introduce the hand, overcome the spasm of the circular fibres cautiously, thus dilate the contracted portion so as to admit of the contraction of the longitudinal fibres, and remove the clots, when the uterus would contract, gradually closing upon the hand. When they came to decide between the use of the hand and an irritating stimulant thrown into the uterus, it should be recollected that the perchloride continued to act as an irritant whilst it remained in the womb. The hand, on the contrary, was withdrawn, and the irritant removed, after effecting the object for which it was introduced; and why should the hand, when used with caution, cause more injury than the head or breech of a fetus—the natural stimulant inducing uterine contraction. He had not much experience of the perchloride in post-partum hemorrhage, but he had been repeatedly obliged to use it in other cases of uterine hemorrhage. He did not look upon it as an innocuous application, and he warned them of this, as he had traced more than two or three deaths as occurring even in minor operations after its use. He stated that distinctly. Taking into consideration the chance of pyemia, he had no hesitation in saying that his experience went to prove that the use of this application to the interior of the uterus added to the risk in uterine operations, and that the fatality was increased in them by its use. He would not therefore have recourse to it unless it was urgently required, believing that other modes of treatment were safer, and, generally speaking, more effectual; but he admitted that cases might occur in which ordinary modes of treatment would prove unavailing, and in such cases he would grasp at the perchloride, and have no hesitation in using it as an additional or *dernier ressort*.

Dr. ATTHILL said he was glad he had brought before the Society the question of the use of perchloride of iron in post-partum hemorrhage. He was induced to do so, because he thought that the Dublin Obstetrical Society ought to have an opportunity of discussing this mode of treatment, which at present occupied so largely the attention of the medical mind of Great Britain. Doubtless nothing had been elicited in the course of the discussion either novel or startling, but a body of facts had been stated which he looked upon as of great value, and he believed that the Society, and the medical public outside the Society, would, from those facts, be able to form a very fair opinion as to the value of this mode of treatment. He hoped no one would suppose that it was meant to supplant other modes of treatment by this one; it was simply an addition to the

previously practised methods, and it was one that should not, as a rule, be had recourse to until a fair trial had been given to other methods; but cases did arise where the symptoms were so urgent that time could not with safety be expended in having recourse to ordinary modes of treatment—such cases as the first and last of his series, where the patients would probably die in a few minutes from post-partum hemorrhage, if he had not resorted to the use of perchloride of iron. Then, with regard to the mortality which had occurred where the perchloride was used, there had been one death in his own private practice; but he thought if they were to analyse the results of the cases in which severe post-partum hemorrhage had occurred, it would be found that, though the patients seldom died at the time, the great loss of blood was frequently followed by death at a not very remote date. He pointed out that Dr. Ringland's summary of the fatal cases left an unfairly unfavourable impression on the Society. He gave a mortality of eleven, out of forty-five, or one-fourth, but he did not state as clearly as he should have done that, of these eleven deaths, a considerable number died of diseases in no way attributable to the use of the perchloride of iron. Several of them were far advanced in consumption, and every one engaged in the practice of midwifery knew that phthisical cases went through their labour very well, but afterwards rapidly declined. These cases ought to be eliminated from Dr. Ringland's list. He mentioned other cases where the patient died a few hours after the perchloride of iron had been injected. The probability was that they would have died a couple of hours sooner if it had not been used. The fatal case in his (Dr. Atthill's) practice to which he had referred was a case of fearful hemorrhage, yet the patient went on well for nine days, and did not die till the fifteenth day. How the perchloride of iron could have caused the fatal result in that case he could not understand. His own view of the action of the perchloride of iron was, that if it did harm, it must do so rapidly. In all cases where fatal results followed from the injection of the perchloride, for the cure of nevi, the patient died rapidly. If he injected perchloride of iron into the uterus of a patient, and she died suddenly, he would say he had caused her death; but if some time elapsed between the application of the drug and the fatal result, he could not understand why the death should be set down to the iron, for it was an antiseptic. The President had not been quite clear as to the cases in which iron should be used. He gave three causes of post-partum hemorrhage—relaxation of the uterus, hour-glass contraction, and morbid adhesions. The case of morbid adhesions might be excluded altogether, for the iron should never be used until the placenta had been expelled. Hour-glass contraction should also be excluded from the class of cases suitable for the application of the perchloride. In these cases the introduction of the hand would be the proper practice. The case where the uterus was relaxed was that in which the perchloride of iron was useful. In the case of relaxed uterus the introduction of

the hand was sometimes very efficacious, but it was not a perfectly harmless practice, and it ought not to be had recourse to until other means had been first tried. There was a certain class of cases in which the introduction of the hand was efficacious and easy of accomplishment—cases where there were a relaxed uterus, a relaxed os, and a relaxed vagina. In such cases if the hand was introduced and the clots cleared out, contraction took place; but sometimes it was found that the uterus subsequently became again relaxed, and filled with blood, and it became necessary again to introduce the hand. He had heard of the hand being introduced seven times; for his part, he disapproved of such a practice as that. But there were cases where the uterus did not relax sufficiently to allow of the easy introduction of the hand. In the fatal case he had related there was a continuous small stream of blood, but the uterus was never very large, and the os was not sufficiently relaxed to enable him to pass his hand into the cavity; he thought that the perchloride ought to have been used in that case, and he believed had he used it his patient would be alive now. The President showed that the hand was but a momentary stimulant, and in many cases this momentary stimulant having been removed, the hemorrhage recommenced, and if perchloride were not used the patient would bleed to death. He (Dr. Atthill) was in favour of using the solution in preference to the solid perchloride. It removed the necessity of the introduction of the hand into the uterus, which ought not to be done if it could be avoided, and he believed it was more easy of employment than the solid preparation. It was no easy thing to introduce the hand into the uterus, and to feel one's way round its walls, and he believed this difficulty would be increased if he had a lump of perchloride of iron in his hand. On the other hand, the introduction of the tube of the syringe could be effected under any circumstances, and the solution applied with ease to the bleeding surfaces. An objection urged against the solution was the danger of its passing through the Fallopian tubes, but he considered this danger was very remote; indeed, he disbelieved in it altogether. Having dwelt on the point that the passage of the solution through the Fallopian tubes was a most unlikely occurrence, Dr. Atthill observed that the cases in which perchloride of iron was useful were those of anemic patients, in whom the blood did not properly coagulate, and when, though the uterus was contracted, the hemorrhage still went on. Here the perchloride would be useful in sealing up the vessels, and also in other cases where there had been extreme hemorrhage it would be useful in stopping at once the further loss of blood. In reply to Dr. MacSwiney, he had to say that he never examined the urine in these cases, and that he looked upon the application of vinegar as perfectly useless.

Dr. HILL RINGLAND said that at that late hour very few words would suffice as a summing-up on his part. Much had been said, and the points in the various papers had been fully and ably discussed by

the several speakers. Dr. Atthill seemed to think the introduction of the solid salt a matter of great, if not of insuperable difficulty. All he (Dr. Ringland) could say was, that in the twenty-three cases wherein he used it, the operation was always effected with the greatest ease and certainty. To use the injection, the salt, in a fluid form, was needed, and to introduce the injection a syringe was a necessity. More than once had he seen the latter burst just at the most critical moment, an accident much to be dreaded and deplored; but in the solid application of the drug, the only instrument required was that with which nature had supplied them all—the hand. Dr. Atthill was correct in stating that the rate of mortality had been exaggerated. In reply to the President's observations, he should wish it to be understood that all the cases detailed by him occurred in the extern practice of the Coombe Hospital, and that many of them, if not all, were literally beyond hope before seen; blood was pouring from them; means of an ordinary kind were at once employed, but resulted in failure; death was inevitably rapidly approaching; iron was then used, and in all, save six, a favourable termination ensued; and even in those six cases the diseased pathological conditions were more than enough to cause the fatal result. The drug was used as a *dernier ressort*, but dangerous cases demanded dangerous remedies.

Obstetric Summary.

DR. SNOW BECK'S CASES.

At Dr. BARNES's request we print the following letter, addressed to the editor of the *British Medical Journal*:

SIR,—Some of your readers, remote from London, have probably felt some surprise that I have taken no notice of Dr. Beck's arguments against the use of perchloride of iron to arrest post-partum hemorrhage; and that, disregarding alike these arguments and his personal attacks, I have simply persisted in challenging him to publish his "cases." Now that he has published his "cases," I beg permission, in vindication of the course I have pursued, to show how far his statements are to be trusted.

I. Dr. BECK'S "*nine or ten cases seen by himself.*" In the discussion at the Obstetrical Society on March 5th, 1873, Dr. Beck stated that "he had met with several cases where death had followed the injection of perchloride of iron into the gravid uterus to arrest post-partum hemorrhage, all the women presenting symptoms quite analogous to those known under the name of puerperal fever." Dr. Beck had also stated that he had never injected the perchloride himself. "Dr. Playfair asked Dr. Beck how many cases of death resulting from the injection of perchloride of iron he had personally seen. It would be interesting to the Society to know, inasmuch as many Fellows had repeatedly injected the iron without ever witness-

ing any bad results; while he, who confessedly had never used the remedy himself, had had the bad fortune to witness several fatal cases." "Dr. Snow Beck answered, that *he had seen nine or ten cases*. The symptoms were similar to those of puerperal fever, but he felt convinced that death was caused by the injection of iron." This, then, was the statement which Dr. Beck was called upon to substantiate. I repeatedly challenged him to publish these "nine or ten cases." The result is as follows:—

In the Journal of January 31st, 1874, Dr. Beck writes: "In the previous Journal, page 661, Dr. R. Barnes endeavours to convict me of having stated something which is inaccurate; but I am unable to perceive that I have done so. It is quite correct that I have 'seen nine or ten cases' where death has followed the injection of the perchloride of iron, and also that I have examined the uterus in four cases." Thus he reaffirms his original statement, but still does not publish the cases. In the Journal of this year, p. 189, you, as editor, appended a note to a further challenge from me, to this effect: "Dr. Snow Beck will now, no doubt, feel bound to forward us the short particulars of the cases."

Dr. Beck then promised the cases; and this is how he kept faith. In the Journal of February 28th, he republished at great length Dr. Heywood Smith's case, in which secondary hemorrhage and septicemia followed on the retention of a piece of placenta, and in which, instead of pursuing the standard rule of dilating the uterus and removing the offending placenta, perchloride of iron was repeatedly injected. To this case which illustrates something more than the action of perchloride of iron, Dr. Beck at great length added another history beginning on "March 14th, 1872." He himself saw the case on the 28th. "He expressed the belief that the perchloride had been taken up into the system, and that death would result."

In the Journal for March 7th, is a communication headed "Concluded from page 269 of last number." It contains the histories of two more cases. The history of the first begins with "May 19th, 1872." Dr. Beck saw her on the 31st. Death took place on the "7th June." The second case in this paper, or No. 4 of the series, Dr. Beck did not see. He describes the appearances of an uterus sent to him by "a medical friend in Yorkshire."

Challenged by me to produce the "five or six cases still due to make up his tale of nine or ten," Dr. Beck sends to the Journal a communication no doubt beside the mark, for you accord to it the following notice: "If Dr. Snow Beck can complete his promised list of nine cases, we shall be happy to publish them. It seems to us useless to continue the discussion in any other form than on the basis of published facts."

Thus, all Dr. Beck has done to bear out his statement that he "had seen nine or ten cases," is the publication of *three* cases. And upon these a further remark is not inappropriate. Dr. Beck says he has never used the injection himself: therefore all his nine or ten

cases have occurred in the practice of other persons. But there is no reference, except in Dr. Heywood Smith's case, to the names of his associates; and not a word from any one of spontaneous confirmation.

Why are the "cases" withheld? Is it Dr. Beck's memory, or his imagination, that is at fault? If so, surely those who saw the cases with him might help him. Is it tenderness for these persons that compels him to silence? Such weakness is denied by the dastardly stab in the back which Dr. Beck deals to a "professor of midwifery in one of the largest medical schools," in the *OBSTETRICAL JOURNAL*, vol. i. p. 724, whose conduct of a case he grossly misrepresents, whom he points at with ambiguous description, but whom he dares not name.

2. *His candour.* In the *OBSTETRICAL JOURNAL* for February 1874, p. 722, Dr. Beck relates in romantic fashion the history of a woman whose death followed on the fortieth day after labour and the injection of perchloride of iron. He never saw the case; and I have it from direct authority, that his information was drawn from the monthly nurse who attended. In his eagerness to accumulate cases, at p. 725 he quotes from the report of the proceedings of the Obstetrical Society, published at p. 45, vol. i., of the same Journal, a case briefly referred to by one of the speakers. Now this case is one and the same. It is another example of Dr. Beck's incurable tendency to make two cases or more out of one. Perhaps he did not know it was the same case. But then what confidence can be placed in his care in the investigation of facts, or in his knowledge of the cases which he relates with such apparent preciseness?

3. *His arithmetic.* Conscious, no doubt, of the "difficulty" into which he had fallen, yet failing in the honest courage to avow his error, in a postscript at the end of his four cases (p. 302, *Brit. Med. Journal*, March 7), he thus seeks to cover his disgrace: "In the last volume of the *Obstetrical Transactions* . . . I find that eleven cases of death, and 'one unsuccessfully,' after the injection of the perchloride, were mentioned by different Fellows of the Society. . . . These cases, with the four now recorded, make a total of fifteen or sixteen cases of death."

I have gone carefully through the reports, and I can only count up ten cases in which death followed the injection of iron. These are: 1, Dr. Heywood Smith's case; 2, Dr. Routh's; 3, Dr. Graily Hewitt's; 4, 5, and 6, Dr. Murray's; 7, 8, Dr. Phillips's; 9, Dr. Bantock's; 10, Dr. Protheroe Smith's. But these cases call for a little analysis. Cases 4, 5, and 6 were referred to by Dr. Murray, who says he had not used the injection in ten cases; in seven, recovery ensued; and in the three others "the patients certainly died after the uterus had been washed out with the solution of iron, but most decidedly this had nothing to do in causing death; indeed, it might have saved these lives, had it been at hand and used earlier." Cases 7 and 8 are thus referred to by Dr. Phillips: "In the one fatal case,

he could not in the least degree connect the death with the injection ;" and in a note he says, " he has since called to mind a case of placenta prævia which he saw in the country, in which the patient died of the labour, notwithstanding the use of the perchloride." No. 10, referred to by Dr. Protheroe Smith as one he had heard of, is the same as No. 3, described by Dr. Hewitt ; so that this case has been made to do double duty. This reduces the actual number of deaths from eleven to nine ; and, of these nine, four are distinctly affirmed by the observers not to have been due to the perchloride, whilst another explanation certainly applies also to some of the others. But take the nine cases, and add Dr. Beck's four : what appears ? Again, that he has counted Dr. Heywood Smith's case twice over—once in his summary from the Society's report, and once in his own four cases. Thus he has thrice been guilty of counting one case as two. Dr. Beck's arithmetic may be summed up in the following formula :—

$$9 = 11, \text{ and } 3 = 4 ; \text{ therefore } 9 + 3 = 15.$$

It is impossible to reason with a man who manipulates facts in such a manner. One might as well beat the air.

Detraction is the homage that Envy pays to honourable success. I accept that homage with the more satisfaction, that it is shared by Robert Lee, Braxton Hicks, Graily Hewitt, and others whose good work will not shine the less brightly because a Beck has tried to tarnish it. If *laudari à laudatis* be the highest testimony to merit, *culpari à culpatis*, albeit the lowest, is scarcely less real.

Here, then, I dismiss Dr. Snow Beck. In closing this correspondence, I beg leave to remind your readers that it was not provoked by me. I have never attacked any one. Dr. Beck in his blind fury has rushed upon his fate. To a series of diatribes which, for audacity in the production and manipulation of facts, for licentiousness of style, for recklessness in personality, are unprecedented in modern medical literature, my only answer is to set forth a few of their author's more flagrant self-contradictions. I have resolutely refused to mix up with this personal question any scientific discussion. I shrink with irrepressible loathing from such a desecration of science. The question as to the value of the topical use of perchloride of iron in post-partum hemorrhage can only be decided by experience. Cases in illustration have been gathering together in profusion in your pages and in those of your contemporaries. I recognise the duty of recording my own experience, and of weighing the objections of others. This duty I shall try to discharge in due time and place. In the meantime, I shall have done some service in eliminating from the discussion Dr. Snow Beck and his worthless or non-existent "cases."

I am, etc.,

ROBERT BARNES.

Grosvenor Street, May, 1874.

Elastic Ligatures in Cesarian Section.

M. Graudesso Silvestri has addressed a note to the Société de Chirurgie on the use of elastic ligatures for the suture of the uterus after Cesarian section ; the great advantage of this mode of suture, according to him, being that the elastic threads do not relax, and that they follow the shrinking of the uterus. Dr. Silvestri has used it in one successful case of Cesarian section.—*Archives de Tocologie*, March, 1874.

Gynecic Summary.

Catelectrotonus of the Ovaries in the Treatment of Amenorrhœa.

Dr. Althaus relates the following case in the *Medical Times and Gazette*:—

“I induced catelectrotonus of the ovaries by placing the negative electrode of the constant battery alternately to the right and left ovarian region, putting the anode alternately to the lumbar spine and to the os uteri by means of an insulated sound. A current of from fifty to sixty cells of Daniell's battery was used, and the action of it kept up for fifteen minutes at a time. After a few such applications, the patient said that she felt the same sensations which she had always felt just before the period used to come on—viz., persistent uterine pain and frontal headache, chiefly in the right side of the head. A slight mucous discharge from the womb began at the same time. The galvanic current was now used on twenty-two different occasions, and the general sensations of the patient at the end of that period were such as to fully convince her that the catamenia were impending.

“This was towards the end of June last. External reasons now obliged her to leave London, and I did not see her again until November 7, when she informed me that she had been disappointed in her expectation. The sensations which she thought premonitory of the occurrence of menstruation had disappeared within the first few days after discontinuing the galvanic treatment ; the discharge from the womb had likewise ceased, and no sign of the period manifested itself. She was anxious to give the treatment a further trial, and it was therefore now resumed. Within the first few days the symptoms which she had felt in summer returned—viz., uterine pain and frontal headache. Shortly afterwards a thick mucous discharge from the womb was established, which was on one occasion sanguinolent, and so acrid that it made the inside of the thighs sore ; for the relief of which cold cream was not sufficient, but free applications of the benzoated ointment of oxide of zinc were found requisite. The current was now used thirty times. The sensations previously described ceased, while the discharge persisted.

“The treatment was now interrupted for ten days, and resumed on

December 22. After three more applications, the period came on Christmas-day, to the intense gratification of the patient. The flow was, for the first twelve hours, quite as abundant as it had ever been before. It then diminished, and ceased altogether four hours afterwards; but was succeeded by a dark mucous discharge which lasted two days longer. As it appeared to me that this first response of nature had been very imperfect, I advised another short course of treatment just previous to the time when the next period would be expected. The patient accordingly came to me again on January 13, and had eight more applications of the current. Menstruation returned on January 22; it was of a particularly good character, and went on abundantly for four days. As, therefore, not only a satisfactory quality, but also decided periodicity of the ovarian function appeared now to have become established, I discharged the patient from further attendance, and she left England for Italy shortly afterwards."

Tampons of Coal-tar in Vaginitis.

Amongst all the treatments recommended for vaginitis medicated tampons are the best. Dr. Siredey most frequently employs a tampon of tow well soaked in "coal-tar saponine." This is an excellent modifier of inflamed surfaces, and moreover is a very good disinfectant, which is valuable in many cases. The tampon can be renewed as often as we wish. It is best to have it in for twenty-four hours, to use injections the second day, and to renew the application on the third.—*Journal de Médecine et de Chirurgie*, March, 1874.

Amenorrhœa of Children.

A girl, thirteen years old, presented herself for consultation (Dr. Siredey's service), complaining of headache and pains in the belly, phenomena attributable to the near establishment of menstruation. She was weakly and ill-nourished. Dr. Siredey prescribed poultices to the abdomen and a series of tonic and fortifying remedies, but no iron. In similar cases, he said, we should be very careful in giving iron. It may without doubt favour the uterine congestion, which determines the definitive eruption of the menstrual flux; but the sanguineous flux is in itself not necessary; if it does not occur it is because the organism is too poor, and the child is ill-prepared. Besides the iron may at the same time exercise a real congesting action on the lungs, determining those untimely phenomena of excitement which bring about the production of pulmonary accidents. Without doubt this prescription is made in a baneful manner, and it is permissible to believe that it is often no stranger to the rapid development of pulmonary complications. Here we should prescribe tonics and restoratives of all kinds, and in the first place cod liver oil, and that in the largest doses that can be borne; quinine in

different forms ; a regular and nourishing diet ; moderate exercise in the open air ; and as external medication sulphurous baths ; if the employment of hydrotherapy is possible, that is the best prescription of all,—*Journal de Médecine et de Chirurgie*, March, 1874.

*Incision of the Cervix Uteri.**

Incision of the cervix uteri, or as Olshausen calls it, “bloody dilatation,” is by no means a severe operation ; yet it is one which requires careful study, for it is an operation the performance of which we cannot avoid, and it may also be attended by dangerous consequences if undertaken in unsuitable cases. The dilatation of the cervix removes disturbances which mostly, but not always, depend upon a pathological narrowing. Most commonly we have to do with a more or less severe dysmenorrhea, or with long-standing sterility. Or, as most frequently occurs, the two anomalies exist together. Of the three kinds of dysmenorrhea, the mechanical, the congestive, and the nervous (for we may pass by as questionable the so-called gouty and neuralgic forms), it is with the first alone that we have to deal. It is not all such cases, but by far the smallest part, which require this operative treatment. Very frequently the narrowing is at the internal os, and this narrowing is often due to a version or a flexion. For such cases, and the still rarer ones, where there is narrowing of the internal os without flexion, dilatation without incision is most judiciously employed. As the cervix is scarcely ever narrowed in its middle, except in the rare cases where the mucous membrane has been destroyed by some lesions, it is only in the cases where the dysmenorrhea is dependent upon the small size of the external opening that the bloody dilatation is suitably employed. Similar remarks apply for the most part to cases of sterility. Incision for its removal is indicated not only in cases where the external orifice is narrowed, but even in cases where the opening is of natural size. It is extremely difficult to say what degree of narrowness is pathological : it is in extreme cases alone that there can be no doubt. If an os can be felt only with difficulty by the finger, and if a sound guided by an experienced hand slip past it again and again, and at last enter with a jerk, it is always pathologically narrowed, and it is rare not to find here marked dysmenorrhea. If distinct mechanical dysmenorrhea exists with sterility, we cannot err in assuming there is a pathological narrowing of the external os. When the removal of sterility is the object, we may go a step further and perform incision, even when the orifice is natural in size. Even when after a careful examination of a patient no anomaly has been discovered to explain the sterility, there is still the possibility of some condition, unknown to us, existing with the natural narrowness of a virgin os, which hinders conception, and this may be removed by incision.

* *Sammlung Klinischer Vorträge*, No. 67. 1874.

The widening of the orifice by the first labour renders subsequent conception easy; this is clearly shown by the instances of women who, having been sterile for many years, rapidly conceive after the birth of their first child. The statement made by West and others some years ago, that openings which permitted a sound to pass were wide enough to allow the spermatozoa to enter has been shown now by thousands of cases not to be correct. The spermatozoa cannot push the surfaces of the mucous membrane aside as the sound does. It has not yet been ascertained how the semen enters the uterus; but it is most probable that for conception, though such may take place in exceptional cases without complete sexual intercourse, the male organ must come in contact with the external os. Incision of the cervix is therefore necessary in all cases of distinct pathological narrowness when attended by a high degree of dysmenorrhea or sterility; also in such cases in which the contraction is less distinct, but yet no other cause can be found for the existing sterility. It is evident that at the time of the operation no inflammatory complication should exist, especially parametritic conditions, which would render the operation dangerous.

With regard to the operation itself, Olshausen recommends Marion Sims' knife, which he considers superior to any of the bilateral hysterotomes. The knife should be passed up as high as is desirable, and the incision made from above downwards, first on one side and then on the other. Two things are necessary to secure a good result—the incision should be made high enough up in the cervix and the vaginal portion should be completely cut through. The tendency in the wound to heal in the deeper parts is so great that in spite of all after-treatment the external os does not retain its size. Various plans have been tried to prevent this rapid healing in the deeper parts, as by placing dilating stems in the canal, or laminaria or sponge tents; these latter, however, cannot be too strongly condemned, as they are liable to set up septicemia. The best way to prevent the too rapid healing is to break down the adhesion with the finger for the first two days, and then to pass the sound so as to break down adhesions where the finger cannot reach. This may, however, set up a slight inflammatory action. Careful cauterization with liq. ferri perchloridi or the actual cautery has not this disadvantage. When sterility exists with anteflexion, and a narrow external os, it is not sufficient for its removal to keep the uterus in its place by pessaries, &c., the orifice must also be dilated. The ordinary bilateral incision is here rarely sufficient. The operation must be modified, and the anterior lip either cut through its middle, or a wedge-shaped piece must be removed. Incision of the cervix is also usefully performed in severe cases of uterine catarrh, when through a too narrow orifice a hindrance exists to the outflow of the secretion; this also permits intra-uterine medications to be more readily applied; it is, however, to be limited to very severe cases, on account of the danger from operative interference.

Rupture of the Vagina and Protrusion of the Bowels.

Dr. Fehling (*Archiv für Gynæk.*, Bd. vi. Heft 1), reports the following interesting case :—A woman, aged sixty-three, who had had eleven children and one miscarriage, had suffered for thirty years with a falling of the womb ; this followed a severe labour in which the forceps were used. All kinds of pessaries had been tried, but had not been of use ; for the last fifteen years she had worn no support for the uterus, and whenever she stood, walked, or sat, the uterus projected externally as large as a child's head ; in the recumbent posture the uterus went back completely. One day, when carrying a pail of water up some steps, the womb prolapsed ; she tried to replace it as she had often done before, with her fingers, and used a great deal of force. She distinctly felt something give way, and immediately the intestine protruded. She was driven home, but could not sit, and had to remain in a kneeling posture. When Dr. Fehling saw her, eight hours after, she was in a state of collapse, conscious and complaining of pain in the abdomen. On examination the coils of the small intestine were seen protruding from the vulva, forming a mass as large as a man's head ; the bowel was, in part, bluish-red, cold, and showed no signs of peristaltic movements. The abdomen was distended and very tender to the touch. By vaginal examination the intestine was followed into the abdominal cavity through a large rent in the posterior wall. The patient was put under the influence of chloroform and an attempt was made to replace the bowel ; this only in part succeeded. A second attempt was then made, the patient being so placed that the pelvis was much raised, the trunk depressed, but now the intestines were so distended by air that it was impossible to replace them ; puncturing them was tried, but with no successful result. The patient died eleven hours after the accident. The rapid death was due to the effect of shock ; the post-mortem examination showed no signs of peritoneal inflammation. Dr. Fehling believes this to be a unique case ; he has found no reference to any case of rupture of the vagina occurring under such circumstances.

Retro-Uterine Hematocoele and its Treatment.

In a short space of time four women afflicted with retro-uterine hematocoele have been observed in the service of Dr. Siredey at the Lariboisière Hospital.

Effusion of blood in the retro-uterine cul-de-sac of the peritoneum is a somewhat rare disease and often difficult to differentiate from pelvi-peritonitis ; it is not, therefore, useless to insist on some very important points in diagnosis. Ordinarily the patients do not present themselves at the hospital until some days after the beginning of the accident ; therefore the symptoms of peritonitis predominate. Here, as in pelvi-peritonitis, we find with the abnormal distension of the belly, fever, and great sensibility in the sub-umbilical region.

Abdominal palpation and vaginal and rectal examination show the presence of a tumour. Constipation and difficulty of micturition exist, and sometimes even retention of urine. None of these signs permit of the differentiation of hematocele from pelvi-peritonitis unless one makes a minute inquiry into the antecedents. One must not forget that in hematocele, as in pelvi-peritonitis, the tumour which is seated in the pelvic cavity is but the second act of the evolution of the disease, and that it may be encountered with nearly similar characters.

In hematocele the onset is sudden and occurs ordinarily in good health. All of a sudden a sharp pain is felt in one or other hypogastrium without previous shivering, and without it having been preceded by malaise. Almost at the same time as the pain, a general weakness comes on, with swooning, and it may be that there is fainting in grave cases; one observes also pallor of the face and coldness of the extremities. These are the symptoms of internal hemorrhage.

At the onset of pelvi-peritonitis, on the contrary, we have shivering, elevation of temperature, in a word a febrile state; when this comes as a complication of an anterior state, the patient has lately been delivered, or is about to miscarry. She presents the characters of acute or chronic phlegmasia of the genital organs.

But as the blood effused into the peritoneum provokes peritonitis, the symptoms resemble one another, and commonly the two diseases are confounded.

Nevertheless, there are differential signs of a certain value which, conjoined with commemoratives, permit us to arrive at a diagnosis.

In hematocele the tumour is soft and fluctuating at first, and gradually becomes harder; above all it develops posteriorly.

In pelvi-peritonitis it is harder at first, softens subsequently, and above all develops at the sides, particularly of the left, of the uterus.

The tumour of hematocele is much more voluminous, pushing and raising the uterus, the neck lying behind the pubis. In pelvi-peritonitis the tumour, less voluminous, does not displace the uterus, but surrounds and fixes it in its ordinary situation.

Owing to the considerable displacement of the uterus the urethra takes a vertical direction, so that it is very difficult to practise catheterism. The bladder and rectum are subjected to very marked compression. Lastly, when the resolution of the sanguineous tumour is effected, it takes place much the most rapidly.

These different signs could be appreciated in all four patients. In two of them the disease terminated by evacuation of the sanguineous pouches. In these two cases the evacuation was preceded by rectitis. In one case in particular the violent pains, the tenesmus and flow of mucus, showed pretty plainly the opening of the collection into the rectum. In the second patient, after the opening of the collection into the rectum, a rectal fistula was established, whence pus flowed in an intermittent manner; the general state became bad,

the patient lost appetite, was taken with diarrhea and daily fever. She was sent into the country where she gained appetite and strength, but she still loses pus from time to time and is not cured. In the other two women resolution was rapid enough, and both left the hospital in good condition.

As regards treatment the advice of authors varies greatly. The first indication is beyond dispute to arrest hemorrhage, then to seek resolution. At first in his patients Dr. Siredey did not prescribe bleeding; they were so anemic that bleedings were decidedly contra-indicated. Absolute rest and ice to the abdomen and internally should be administered as long as a return of hemorrhage is to be feared; then tonics, brandy and wine. The functions of the rectum and bladder should be watched with care.

Later in the development of inflammatory accidents: Neapolitan belladonna ointment, blisters, purgatives, and it may be iodide of potassium and alkalies as resolutives.

Ought one to seek to evacuate the sanguineous collection by direct surgical intervention? It was much extolled some years ago, but now-a-days those who much advised the operation have returned to their previous opinion. Dr. Siredey for his part in a considerable number of cases has never seen that it was necessary, and has found the therapeutic measures we have indicated sufficient. The opening of a voluminous collection of blood is to be dreaded for many reasons, though when it does not give rise to accident it may be followed by a rapid and brilliant cure, as he has once seen in the service of Dr. Guyot, at Saint Antoine. A goodly number of cases terminate by resolution; it is then useless to evacuate; at other times when suppuration occurs one is always master of action or expectation.—*Journal de Médecine et de Chirurgie*, March, 1874.

Pediatric Summary.

Cauterization in Prolapse of the Rectum.

Prolapse of the rectum in young children constitutes such a rebellious affection that it is well to recal the means which appear most capable of giving success. Amongst these we have lately seen cauterization of the margin of the anus answer fully in one case and partly in another. In the first we had to do with a child of four years old afflicted with falling of the rectum for more than a year, perhaps even before that. At the time the child was nursed.

The intestine projected considerably each time the child went to stool, and that was often several times a day. The mother reduced it easily, though sometimes with pain. The operation was thus practised:—After having previously covered the parts with a layer of collodion to preserve them from the radiating action of the heat, and when this layer was quite dry (an indispensable precaution to prevent its catching fire) five heated points were applied by means of the

platinum pointed cautery to the margin of the anus, and in the thickness of the skin. Seven days after there was sensible amelioration; the bowel had escaped only three times since the operation, and much less in proportion than previously. In another week the traces of the cauterization had nearly disappeared; the accident occurred only once in eight days; and lastly, in a month the intestine has barely escaped three or four times, and then only very slightly. The same operation practised on a child two years old did not give so favourable a result; there was, however, a sensible amelioration, especially as regarded the volume of the bowel which escaped. In this case, however, the cauterization was made with cauteries insufficiently heated, and it is proposed to renew it under better conditions.—*Journal de Médecine et de Chirurgie*, March, 1874.

The Treatment of Trismus and Tetanus Neonatorum by Hydrate of Chloral.

Dr. And. v. Hüttenbrenner (*Jahrb. f. Kinderheilk*, vii. Heft 1, 1873) gives a report of three cases of tetanus neonatorum which were treated by chloral hydrate, two of which were cured. From these cases he draws the following conclusions:—

1. That tetanus, as has been already shown by previous communications, is not an absolutely fatal disease.

2. That tetanus may run its course either with or without fever; that those cases which are accompanied with high fever and run a rapid course, are the cases where the tetanic symptoms are probably only a part of the symptoms of a general blood-poisoning; whilst the other non-febrile cases are only to be looked upon as reflex convulsions dependent upon peripheral irritation.

3. With regard to the prognosis, the cases without fever are the most favourable, although the occurrence of a high degree of fever does not necessarily render the prognosis fatal, as has been exemplified by the case published by Kirchsetters.

4. Hydrate of chloral is by no means a specific against tetanus, yet it is to be preferred to other medicines, (1) because it is a pure hypnotic; (2) because it has not the disagreeable after-effects of morphia, nor does it cause hyperemia of the brain, which always follows from morphia; (3) because it can easily be administered to the child.

Chloral is to be preferred to chloroform, as we are better able to control its effects upon the child. The action of the chloral is essentially to give the child quiet sleep, and thus to ward off the fatal consequences of the long-persisting muscular contractions, and especially of the diaphragm; and thus, as appears from the successful cases, the tetanus does not last longer than fourteen to twenty-one days; hence we have only to keep the child alive over that time and a cure results.

Obituary.

FREDERIC BIRD, M.D., F.R.C.P.

DR. FREDERIC BIRD was born at Colchester on the 23rd of January, 1818. The history of his early years was much the same as that of his brother Golding, nearly three years his senior. He entered Guy's Hospital a few years later than his brother, and after passing through the various classes, held resident appointments under Addison and Ashwell, the former of whom he was accustomed always to describe as the most profound physician of his time. In 1840 we first hear of him at the Westminster Hospital, where he held the post of clinical assistant for two successive periods of six months, before he finally settled down into private practice in Craven Street, Strand. Soon after this we find him performing ovariectomy for the first time in London, on June the 26th, 1843. Rare courage in the young man, barely twenty-six, performing an operation of this formidable character, and with the sanction of but few of the leading physicians of that day. All honour to those who supported him, especially Sir Charles Locock and the late Dr. Rigby. Those who were present at this and subsequent operations, were amazed at the skill, dexterity, and presence of mind of the young physician. Soon after this he is again at the Westminster Hospital, lecturing on forensic medicine in conjunction with Mr. Hodges, afterwards Chief Justice at the Cape; he also held the office of Physician to the Maternity Charity. His practice then rapidly increasing, he migrated to Brook Street, and again to a larger house in Park Street. In 1861 he was appointed Obstetric Physician to the Westminster Hospital, where he continued to lecture on midwifery and allied subjects until the time of his death. His lectures, delivered extempore, were distinguished by terseness and point, and were very different from the laboured discourses often read by lecturers, so uninteresting both to teacher and student. His large and varied experience gave ample opportunities for illustration, and his discussion of the opinions of others was always with the intention of giving essential knowledge of the subject and arrival at the truth. In 1863 he took the late Mr. Skey's house in Grosvenor Street, where he continued to the end to receive a very large circle of patients. By them he was idolized, and beside his professional skill his kindheartedness and generosity will long be remembered. He had but little time for writing, and was seldom seen of late years at the Medical Societies. But he commenced some years ago in the *Medical Gazette* a series of papers on ovarian disease, and for some time he edited the *Provincial* now *British Medical Journal*. During the last few months especially he had suffered much from the effects of overwork, and had twice been obliged to remain in the house for a few days. His fatal illness commenced on April the 8th with flying pains, which he thought at first were of a rheumatic nature, he having suffered two previous attacks of rheumatic fever some years before. Soon, however, the symptoms assumed the

form of suppressed gout, never reaching more than a subacute character, great prostration, with but slight local affection. After remaining in this condition some time, grave symptoms of lung mischief, culminating in a low form of broncho-pneumonia, came on, on the Saturday before his death. From this state however he rallied wonderfully, but on Tuesday, the 28th, symptoms of heart failure were observed, and he sank rapidly, dying at 6 P.M. His old friend, Mr. Johnson, of York Road, and his colleague, Dr. Potter, attended him throughout, aided at an early period by the valued advice of Dr. Wilks. Dr. Reynolds, who had attended him in his previous illness, also took part in the consultations of the last few days.

Dr. Bird's premature death adds another to the now long list of those who have lost their lives by a too devoted attention to their professional work. To die in harness is no discredit, but to the large number of friends and patients who mourn his loss, it must be a subject of regret, that for want of relaxation from his duties, a valuable life has been sacrificed. In him we lose a sound physician, a kindhearted friend, and a Christian gentleman.

News.

HOSPITAL FOR WOMEN, SOHO SQUARE.

The following resolutions were passed at the last annual meeting :—

“All honorary medical officers of the hospital shall be elected at a special general meeting of the members on the nomination of the committee.”

“Every physician or surgeon shall, on his completing the age of sixty-five, vacate his office, but may be appointed consulting-physician or surgeon if the members assembled at a special general meeting, convened for that purpose, shall think fit.”

“The institution shall be under the management of a committee consisting of not more than fifteen or less than twelve members, and one-third of the number, who have been longest in office, shall go out by rotation annually, but shall be eligible for re-election at the annual meeting of subscribers, four being the number to go out if less than fifteen constitute the committee. The committee shall have power to fill up vacancies occurring by death, resignation, or otherwise before the next annual meeting.”

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

“Die heilwirkungen der Eisenquellen von Bad Schwalbach dargetellt,” von Dr. Med. Rudolph Birnbaum. Wiesbaden, 1874.

Communications have been received from Dr. Ashburton Thompson ; Dr. Draper, York ; Dr. Haussmann, Berlin ; Dr. G. Bantock ; Dr. Carter, Dr. Wiltshire, and Dr. Barnes.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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Original Communications.

ON NIDATION IN THE HUMAN FEMALE.

By J. H. AVELING, M.D.

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SINCE our incomparable Harvey pointed out the resemblance existing between the womb and the nest, and menstruation and infecund oviposition, many writers have discovered other analogies, and have likened the change in the mucous membrane of the uterus preparatory to the reception of the ovum to the act of nidification in birds.*

This peculiar function of the uterus has I believe been far too much neglected. Lying as it does between the acts of ovulation and menstruation, it has in a great measure been confounded with them, and has consequently not received that special consideration which its separate although correlative existence demands. Another reason why it has escaped attention is most probably to be found in the fact that hitherto this process has had no name applied to it. The

* "Both the Hen and Housewife are so matcht
That her Son Born is only her Son Hatcht;
That when her Teeming hopes have prosp'rous been,
Yet to Conceive is but to Lay within."

Lines by Dr. Llewellyn, prefixed to Harvey's Works.

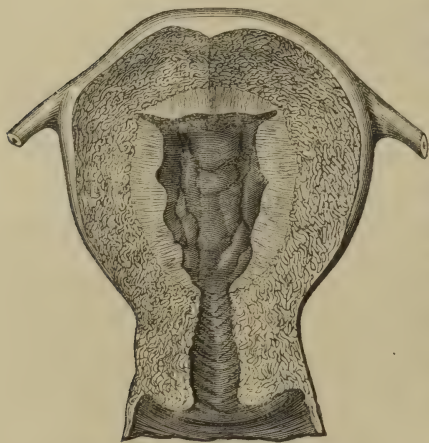
similitude between it and the nesting or nest-making of birds naturally suggested one of the three following words as the most appropriate—viz., Nidification, Nidamentation, and Nidation; the last appearing to be the most simple and sufficiently definite has been adopted.

NIDATION.

Definition.—The act of nidation consists of the periodical development of the mucous membrane lining the interior of the body of the uterus.

The nidal decidua.—The membrane thus developed has received a great number of names. The one now most usually employed is menstrual decidua, but as it is formed independently of menstruation this is obviously a misnomer, and I have adopted as more appropriate that of nidal decidua.

FIG. 1.



The nidal decidua fully developed.
(CAZEAUX.)

It is developed in the intermenstrual period, and immediately previous to the act of nidation attains in some parts considerable thickness. Its deep surface is intimately blended with the muscular structures, and its superficial is thrown into irregular folds. It is not my intention to enter here into the consideration of its microscopical formation. This has been, and still is being, ably investigated. The latest paper

on the subject being that of Dr. John Williams read before the Royal Society of London.

Periodicity of nidation.—Nidation being comparatively speaking an occult function, it is difficult to determine positively at what period of life it commences, how frequently

it is abnormal in its character, or at what portion of the intermenstrual period it is most actively carried on. By frequent dissections, however, and more careful observation, these points may in time be very much elucidated. It most probably commences in an imperfect manner with the reproductive life of women, and recurs with regularity according to the periodic habit of the individual until that life ceases. During the week preceding menstruation it appears to proceed more energetically than at any other time. The supply of blood is then very large, and so altered does the uterus become in size and appearance that its hyperemic condition has frequently been mistaken for that resulting from pregnancy. The duration of the nidal period varies in different women. It usually continues three or four weeks, and corresponds with what has hitherto been called the intermenstrual period.

Nidation and ovulation.—Without an ovary there can be no reproductive life, and without this life there can be no nidation. So far, therefore, nidation is dependent upon ovulation for its being. Sexual life, however, once established, the existence and periodicity of nidation proceeds with an independence and individuality, the actuality of which is little appreciated.

The facts pointed out some time ago by Dr. C. Ritchie regarding the relations between ovulation and menstruation apply with equal force to those existing between ovulation and nidation. In spite of the destruction by morbid action or removal by operation of both ovaries, nidation is found in some cases to be continued. It also occurs when no ovum reaches the cavity of the uterus. In extra-uterine pregnancy, the nidal decidua is formed as it also is in the non-gravid half of a bicornate uterus.

Nidation and impregnation.—The relations existing between nidation and impregnation are but little known. Dr. Power, however, saw how far one must be dependent upon the other. He says, "When the ovum is mature the uterus should be properly prepared for its reception. Any derangement in the equilibrium of this relation will tend to derange the subsequent steps of the process; thus, if the ovum is

matured before the uterus is prepared for it the conception will be rendered abortive, et vice versâ, the same effect will ensue if the uterus is too early prepared for the reception of the ovum." It seems certain that ova are discharged from the ovaries at irregular periods, and not as has lately been believed once a month at or near the time of menstruation. It is therefore an interesting question to decide at what period of nidation the uterus is in a most fit condition for receiving the ovum and permitting impregnation. Probably when the process of nidation is most active, insemination is impeded by the obstacles to the progress of the seminal fluid caused by the largely developed nidal decidua, and the increased secretion of tenacious cervical mucous. At this time the uterus is more particularly prepared for the reception of the ovum, which in an impregnated or unimpregnated condition may be slowly making its way down the Fallopian tube. I have often observed that a sound will pass readily into the uterus at the commencement of nidation, and that it can scarcely be made to enter at its conclusion. It has been contended by some authors that nidation does not take place independently of impregnation. This hypothesis, however, cannot be maintained, for Mondat discovered the nidal decidua in two sterile women who had never menstruated, and Courty has removed it from the vagina of a girl whose hymen was perfect.

Nidation and lactation.—During the latter days of nidation a sympathetic hyperemic condition of the breasts is frequently observed. They become tumid and painful, and not unfrequently a thin milky fluid is secreted. When denidation has taken place all these conditions suddenly disappear, and the breasts again become softer and smaller, and lose their tenderness. After parturition, when lactation is fully established, the function of nidation is probably suspended; but it is speedily re-established when the nutritive demand of the breasts ceases.

DENIDATION.

Nidation has been likened to gestation. Denidation may be compared with parturition. The nidal decidua having

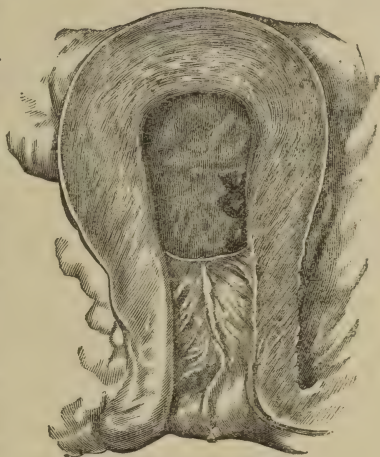
reached its full development, and no impregnated ovum having arrived to demand from it protection and sustenance, a process of degeneration takes place, its attachments are loosened, and it is expelled by the contractions of the uterus, sometimes wholly in the shape of a triangular sac, but more frequently in minute portions. How long this process occupies has not been determined, but it is probably completed during the menstrual period.

Denidation and Menstruation.—The act of denidation probably determines that of menstruation, because it is from the denuded surface of the uterus caused by the re-

moval of the nidal decidua that the menstrual flow comes. Power declares the efficient cause of menstruation to be, “an imperfect or disappointed action of the uterus in the formation of the membrane (decidua) which is requisite for its connexion with the impregnated ovum.” He also says, “an improvement might be made upon the axiom that ‘women who do not menstruate do not conceive,’ by substituting ‘a woman menstruates because she does not conceive.’”

I have no intention of ignoring the individuality of the menstrual nismus. Where no uterus exists and consequently no nidation, moliminal symptoms are observed, and blood issues from various parts of the body. It must, however, be admitted, that denidation and menstruation are generally contemporaneous phenomena ; and, although both may have separate existences, and the latter is not necessarily a sequence of the former, menstruation must in most cases be controlled in its periodicity by nidation. The relative values of the two acts are very widely different, for whereas nidation must be looked upon as a primary and important

FIG. 2.



The cavity of the uterus after denidation. (TYLER SMITH.)

reproductive function, menstruation, as is well known, is secondary and insignificant. Many women become pregnant before menstruation, and others have borne children who have never menstruated at all. The process of denidation is doubtless very much assisted by that of menstruation. By the menstrual flow the *débris* of the nidal decidua is floated and washed out of the uterus and vagina, and in this way the denidal act is rendered more prompt and effective.

DISORDERS OF NIDATION.

Painful nidation.—Every gynecologist must have met with patients who suffer pains in the pelvic region, commencing a week or ten days previous to menstruation. In many it appears exactly a week before the period, and it continues with more or less intensity until the menstrual flow is fully established, when all suffering ceases. It cannot be doubted that this pain is due to nidation. It occurs in women having a chronic hyperemic condition of the uterus, which is doubtless increased by the afflux of blood necessary for the formation of the nidal decidua. Two hyperemias of morbid and physiological origin thus unite to produce the pain, weight, and numberless other sympathetic feelings so often met with.

Hypernidation.—The large afflux of blood just referred to, if it produces no pain will certainly have an influence upon the development of the nidal decidua. This intense hyperemy is the cause of that increase of its growth which ends in the production of a decidual sac, so tough as to resist the ordinary denidal disintegration, and to pass from the genital passages in an unaltered condition. Scanzoni had two patients who from their symptoms could always say with perfect certainty one or two weeks before the return of the menses, whether or not they would pass membranes. Power believed hypernidation to be due to increased ovarian action. This may be one factor, but it is evident that every cause of uterine hyperemy, whether active or passive, must have the same tendency. It is a question whether excessive proliferation of the nidal decidua

is not sometimes produced by what may be called *missed denidation*. Cases in favour of this view are not wanting. Women suffering from hypernidation are not necessarily sterile, for many cases have been observed, in which impregnation has taken place, notwithstanding the monthly expulsion of an unduly developed nidal decidua.

Subnidation.—There can be little doubt but that in cases of serious disease and great weakness, the function of nidation, like that of ovulation and menstruation, is sometimes held in abeyance, and the nidal decidua is either not formed at all or is imperfectly developed. It is difficult to say what influence subnidation would have upon menstruation, but it is easy to conceive what effect it must have upon fecundation. An impregnated ovum arriving in the uterus when unprepared by the nidatory process for its reception would very probably be aborted. Subnidation therefore must be looked upon as one of the causes of sterility. Dr. A. K. Gardner fully admits this. He says, "The defective or absent formation of this uterine mucous membrane is most probably a frequent cause of sterility, especially if all the ordinarily observable conditions of menstruation be present. An egg is discharged normally and may even be as regularly impregnated, but it meets no proper nidus in the uterus."

Abortive nidation.—There is, doubtless, a pathology of the nidal decidua, but this has yet to be studied. There is also probably such an accident as nidal abortion, capable of being produced by morbid, mechanical, chemical, traumatic, and physiological influences. This is another field for further investigation. What influence has it upon the too early recurrence of menstruation?

FIG. 3.



The nidal decidua expelled whole.
(BARNES.)

DISORDERS OF DENIDATION.

Difficult denidation.—The process of denidation may be divided into two periods, the separative and the expulsive. What the disorders of the first are must for some time remain in obscurity, but the troubles attending the second stage have been known and appreciated for a long time. What has hitherto been called membranous dysmenorrhea is in reality a disorder of denidation (dysdenidation). In cases of hypernidation the uterus frequently experiences great difficulty in expelling the hypertrophied nidal decidua. It fills up the internal os and cervical cavity, and mechanically obstructs the flow of the menstrual fluid, producing pains as agonizing and continuous as those of childbirth. This difficulty is of course increased when any contraction or flexion of the uterine neck exists. Painful expulsion of the nidal decidua may also take place, independently of menstruation, as has been observed by Waller, who says,—“There is often no menstrual secretion, but in its stead a tough thick membrane, resembling the tunica decidua of pregnancy, is discharged, the uterus acting forcibly, as in labour.”

CONSIDERATIONS IN TREATMENT.

I will not here enter into the treatment of the disorders of nidation and denidation, but it must be evident to every one that no rational application of remedies can be used in these cases unless it be guided by a competent knowledge of their etiology. When it is necessary to operate in any way upon the cavity of the uterus, it must evidently be unwise to do so during the latter days of nidation, whereas depletion, as a rule, will be most required and effective at this period. Tents and stems when used should be inserted early in the nidal period.

GRAVIDAL NIDATION.

When impregnation takes place denidation is postponed, and the nidal decidua continues to be developed in a manner so well known as to need no description here.

GRAVIDAL DENIDATION.

It may be broadly stated that denidation is always due to a cessation of the nutritive action subservient to reproduction. When the demand ceases the supply is withheld. In ordinary nidation the nidal decidua, having arrived at its normal development, degenerates, disintegrates, and is discharged, because no further demand is made upon it. The same occurs in gravidal denidation. A discontinuance of the claim upon reproductive nutrition is most commonly caused by the full development or death of the fetus. In either case denidation naturally follows. We have here, I think, a rational explanation of the determining cause of labour. Even in extra-uterine gestation, when the fetus dies or arrives at maturity, denidation takes place, and the nidal decidua is expelled with uterine pains simulating those of parturition. The analogy between the lochial and menstrual discharges has frequently been insisted upon.

Partial gravidal denidation artificially produced, is one of the best methods of inducing premature labour.

The foregoing lines present the reader with but a scanty syllabus of the subject of nidation. It is an imperfect, and often, I fear, an inaccurate sketch ; but I hope soon to see its defects supplied and its errors corrected. I have endeavoured to demonstrate the individuality and independence of the function of nidation, and its claim to a distinctive name and a special consideration. I have also striven to explain how important a part it plays in the progressive acts of reproduction, and that it should not be confounded with ovulation and menstruation, but be looked upon as a link connecting the two. The interest of the subject is intense. Sir J. Y. Simpson has rightly said,—“There are few circumstances, either in healthy or morbid anatomy, so strange as that the proper mucous tissue of the uterus itself may, within the compass of a menstrual period, form, enlarge, separate, and again be reproduced.”

ON INTRA-UTERINE INJECTIONS IN HEMORRHAGE.

By WILLIAM DRAPER, M.R.C.S., &c., York.

Formerly Resident Obstetric Officer to the Middlesex Hospital.

WITH the view of adding to the evidence concerning a subject so important as that of injecting fluid* styptics into the uterus in hemorrhage from that organ, I publish a short summary of my observations during the seven years which I have practised the treatment. I much regret that I have not preserved any record of the post-partum hemorrhage cases in which I have employed injections of the solution of perchloride of iron; yet, although I have used this form of injection of various strengths, in a considerable number of cases, I can confidently say that, personally, I have *never* met with an instance in which such injections into the uterine cavity have done harm, and rarely with one in which they have failed to do good; indeed, most commonly have I found their use of the most decided and prompt benefit.

Serious uterine hemorrhage must always be looked upon as a grave matter, even by the most experienced practitioners; still, in such alarming conditions, I now certainly find not a little solace and confidence in the feeling that, should the ordinary means to arrest the flooding fail, there is still a *dernier ressort* in intra-uterine injection, which is almost certain to bring the case to a favourable issue, if timely use of it be made.

In forms of uterine hemorrhage other than post-partum, such, for instance, as profuse menorrhagia, I have employed intra-uterine injections, not only of solutions of iron, but also of tannic acid, infusion of matico, and iced water. I append three cases illustrating different forms of hemorrhage in which some of these fluids have been injected with beneficial results.

As a rule, I am of opinion that the iron injections are the most reliable, still I think there are certain conditions (as in Case I.), in which some of the other styptics might perhaps be more suitable.

CASE I.—I was called to this case by a patient who was in the eighth month of pregnancy; for three or four days before consulting me, she had suffered very considerable hemorrhage. A vaginal examination discovered the cervix uteri soft and yielding, and about two-thirds obliterated. The tip of the index finger passed freely into the external os uteri; but the internal os was not dilatable. I ordered the patient to remain in bed, to have a draught containing sulphuric acid and laudanum every three hours, with cold to the vulva, and applied a firm abdominal bandage. In the evening of the same day the hemorrhage became still more violent. The external os now admitted the finger freely. On passing my hand into the vagina, I was enabled to reach the internal os, which, with difficulty, admitted the finger end, but which appeared dilatable. The fetal head could be felt presenting, but nothing like placenta was discovered. The hemorrhage being really alarming, I passed an elastic catheter into the uterus (carefully avoiding the membranes), and injected about two ounces of a strong infusion of matico, and then plugged the vagina. The patient being much exhausted, beef-tea and brandy were given freely. There were no labour pains. The following morning, when I removed the plug, some slight hemorrhage occurred, so the uterus was again injected with the matico infusion, and the vagina replugged. There was rather more dilatation of the os. When the plug was again removed there was no recurrence of hemorrhage. Labour set in naturally some days later, and came to a favourable termination, a living and healthy child being the result.

CASE II. illustrates the successful employment of iced water as an intra-uterine injection. I was called to this case some time after the expulsion of the placenta, the labour having been a natural one. I found the patient much exhausted from the loss she had sustained, and still flooding violently. Having restored her somewhat with brandy, &c., I removed some large coagula from the uterus, gave ergot, applied pressure, &c.; in fact, I employed all the ordinary means to arrest the flooding without avail. I then passed a

large gum-elastic catheter (having a syringe attached), into the cavity of the uterus, and injected several ounces of iced water. The uterus almost immediately contracted ; pressure then being applied, the contraction was *kept* up, and no further hemorrhage occurred.

CASE III.—Some time since a lady came under my care, whom I ascertained to be suffering from retroversion of the uterus. One of her most troublesome symptoms was very profuse and frequent menstruation, which was present, to a very serious extent, at the time she consulted me. Almost every available remedy was prescribed without having any influence over the discharge, and as the patient was reduced to an exceedingly weak state, I resolved to inject the uterus with solution of iron. Accordingly, I injected into the uterine cavity about two ounces of a solution of tincture of perchloride of iron, of the strength of one part to ten parts of water.

The hemorrhage was at once arrested, and there was no recurrence of it, nor did the slightest unfavourable symptom follow the practice. A Hodge's pessary was now applied, and, so long as it was worn, the menstrual periods passed over naturally, without either excessive discharge or pain. On one or two occasions, however, when the patient very injudiciously left off the pessary, serious menorrhagia recurred, and again the only successful means of arresting it was the iron injection, which never failed in its action, nor was it ever productive of the slightest untoward result.

CASE OF PREGNANCY AND MISCARRIAGE COMPLICATED BY DIABETES INSIPIDUS.

By J. MATTHEWS DUNCAN, M.D.

(From Casebook Notes, taken by Mr. J. R. Morison. Read to the Edinburgh Obstetrical Society, June 10th, 1874.)

SOME time ago* I recorded a case of pregnancy and labour complicated with diabetes mellitus. The following imperfect case I publish because of its rarity and because of

* See *Edinburgh Medical Journal*, February, 1873.

the striking similarity between the general features of its course and those of the former. The similarity will not strike the reader as it impressed me, because some of the points were of a kind that does not admit of verbal description, such as the general appearance, and the character of the complaining.

May 4th.—E. P., aged twenty-five, married, mother of four healthy children naturally born, has enjoyed pretty good health till very recently. She is now in the seventh month of pregnancy.

She had about fourteen years ago a blow of great severity on the back of the head. Shortly after this she observed that she drank a great deal of water, and that she had a great flow of urine. This copious drinking, which she restrains, has continued ever since, as also the great flow of urine, which necessitates getting up more than once during the night.

Her present illness commenced about the beginning of April, with sickness and vomiting, blood being then thrown up in considerable quantity. Besides, there was much weakness, occasional headache, and severe pain with tenderness in the region of the left kidney and in the hypogastrium. These symptoms are still present.

May 12th.—The pain and tenderness in the region of the left kidney are now greatly less, but there is worse pain and tenderness now in the region of the right kidney.

May 17th.—Pain in region of right kidney greatly complained of. Much restlessness and thirst.

May 18th.—Miscarriage at 1 A.M. The child survived five hours. Feels very weak.

May 19th.—Slept last night only for an hour or two. Is really and feels very ill. Great tenderness on right side of abdomen down as far as iliac fossa. Takes milk and beef-tea.

May 20th.—Is better. The renal pains continue. Is troubled with cough.

May 23rd.—A large piece of decidua was discharged this day, of irregular form, but as big as three inches square. The pain in the kidneys and the sickness have ceased.

May 26th.—One grain of codeia was given in pill thrice daily, and continued on the 27th, but as it caused headache, sickness, and giddiness, it was discontinued.

June 1st.—She left the hospital, saying she was now quite well, or at least as well as she generally is.

The urine contained no albumen, no sugar, but a considerable cloud and deposit of mucus. It was light straw coloured, not transparent, and of acid reaction. The following Table supplies some interesting data as to the urine, the pulse, and the temperature. The quantity of urea was determined by the nitrate of mercury process of Liebig.

Date.	Quantity drunk.	Quantity passed.	Specific Gravity.	Urea.	Pulse.	Temperature.
	Oz.	Oz.		Grains.	Noon.	Noon.
May 6	—	140	1012	480	—	—
„ 8	—	160	—	—	—	—
„ 9	—	134	—	—	—	—
„ 10	—	200	—	—	—	—
„ 11	—	170	—	—	—	—
„ 12	—	200	—	672	—	—
„ 13	—	216	—	—	96	99°
„ 14	170	230	—	—	—	—
„ 15	150	250	—	—	—	—
„ 16	—	300	—	—	—	—
„ 17	—	—	—	—	144	105°
„ 18	—	200	—	—	120	102·3°
„ 19	—	—	—	—	132	102·2°
„ 20	—	300	—	860	96	98°
„ 21	—	204	—	640	—	—
„ 22	—	260	—	655	—	—
„ 23	—	300	—	610	72	97·2°
„ 24	320	350	—	630	80	97·2°
„ 25	380	230	—	625	84	97·8°
„ 26	260	254	—	—	84	97·8°
„ 27	360	300	—	450	—	—
„ 28	380	320	—	417	—	97·4°
„ 29	400	320	—	—	—	—
„ 30	400	290	—	—	—	—
„ 31	400	240	—	—	—	—
June 1	400	270	—	—	—	—

Reports of Hospital Practice.

CHELSEA HOSPITAL FOR WOMEN.

IMMEDIATE TRANSFUSION OF LAMB'S BLOOD.

By J. H. AVELING, M.D.

MRS. MACC——, aged thirty-two, mother of four children, was admitted into the hospital under the care of Dr. T. Chambers, on the 27th of April. She was in a very exhausted condition. The abdomen was found enormously distended. The distension was discovered to be produced by a large accumulation in the bladder of urine, which, when drawn off, was found to be of a dark red colour, due to the mixture with it of blood. Retention of the urine had been caused by a retroverted gravid uterus. As the patient's condition seemed to get worse, Dr. Barnes saw her in consultation with Dr. Chambers and myself, and it was decided to empty the uterus and replace it. This was readily effected by Dr. Chambers, and it was further determined, should the patient not improve, that transfusion should be attempted. I will not enter further into the details of this most interesting case, as they will doubtless be fully given by my colleague. It is necessary to add, however, that after the removal of the urine, whenever the catheter was introduced, the fluid which passed through it was almost entirely pure blood.

Operation.—April 29th, 1874. At 9 P.M., a lamb having been procured, its carotid artery was laid bare by Dr. Chambers, and the efferent tube of my transfusion instrument was passed into it, and secured by ligature. The lamb was then brought to the ward in which the patient lay, and placed on a stool beside her bed. I then opened a vein in the patient's arm, introduced the afferent tube, and united it by means of the india-rubber portion of the apparatus with the efferent tube. A temporary ligature upon the artery of the lamb was now relaxed, and the operation commenced and continued by the method described in this Journal (Vol. I., p. 309), until nine ounces of blood had been trans-

fused. The patient, who before and during the operation was quite indifferent to all that was going on and talking incoherently, seemed little affected by it. When it was finished she perhaps talked a little faster, and the heart's action became fuller, but did not diminish in its extreme frequency. It soon became evident that something more than transfusion was required to save the patient's life. She died at 10 P.M.

Remarks.—As this is the first case in which lamb's blood has been transfused into a human vein in this country, I regret that it should have proved unsuccessful, for, although it is probable that lamb's blood can never be a perfect substitute for man's, still, on the Continent, many successful cases of transfusion of lamb's blood have been recorded, and its use may under certain conditions continue to be advisable. Dr. Albini, of Naples, and Dr. Hasse, of Nordhausen, have used lamb's blood with complete success, the latter having employed it in fifteen cases. When human blood therefore cannot be obtained, lamb's blood should without hesitation be used. No person should now be allowed to perish from loss of blood without transfusion in some form or other being attempted.

General Correspondence.

DR. HALL DAVIS'S SPECULUM.

(To the Editor of "*The Obstetrical Journal*.")

SIR,—I do not see anything new in the suggestion of Dr. J. H. Davis in reference to his metallic tapering tubular speculum, excepting the material of which it is formed (and that I consider somewhat objectionable). I have been in the habit of using the tapering trumpet-mouthed speculum for the last twenty-five years, for which I refer you to a plate in my "*Handbook of Obstetric Surgery*," first published in 1857, a third edition of which is now published (1874), *vide* page 265.

I am, &c.,

CHAS. CLAY.

Andenshaw, near Manchester,
June 1st, 1874.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

JULY, 1874.

THE PERCHLORIDE DISCUSSION.

IN managing the correspondence of this Journal, whilst holding ourselves irresponsible for the opinions of authors, we have always endeavoured to afford them space and opportunity for the fullest promulgation of their doctrines and the freest expression of their sentiments. "The peculiar evil of silencing the expression of an opinion is that it is robbing the human race," says a modern philosopher. "If the opinion is right, they are deprived of the opportunity of exchanging error for truth; if wrong, they lose what is almost as great a benefit, the clearer perception and livelier impression of truth, produced by its collision with error." In our current Number we publish what we hope will, at least for the present, be the end of a discussion upon the merits and demerits of the treatment of post-partum hemorrhage by the intra-uterine injection of a solution of perchloride of iron. It was opened a little more than a year since at a meeting of the Obstetrical Society of London, and while many of the speakers were in favour of the plan of treatment, some were of a contrary opinion. This divergence of sentiment is always salutary, for it not only elicits many facts which would otherwise remain latent, but also exercises a wholesome check upon the expression of wild hypotheses and ill-digested opinions. There are, however, two ways of conducting discussions—the logical and the emotional. The one is powerful and calm, the other weak and sensational. Of these two methods it is not difficult to decide which is the more preferable. The emotional may for the moment be more interesting to a general audience, but the logical is that which will be useful and permanent in its effects. The conquests of science are to be effected by the irresistible artillery of facts, not by the attractive scintilla-

tions, the startling reports, and the obscuring fumes of silly squibs. We are proud to acknowledge that generally speaking the very best taste is displayed by members of the medical profession, both in their spoken and written discussions, but it must also be admitted that occasionally unmistakeable signs are evident of a want of more kindly feeling in the heart of our brotherhood, and of more consideration for the weaknesses and peculiarities of our fellows. Irritating controversies disunite and weaken us as a body, uselessly exhaust our already overworked brains, and conduce neither to our personal happiness nor the public welfare. There is surely nothing in the character of the discussion we are considering to warrant any but most serious handling. In the whole range of medical practice there is not a more solemn subject. In post-partum hemorrhage death is imminent in its most appalling form. When considering the best method of averting the direst of all social catastrophes there should be complete calmness and freedom from distracting passions. It is not the time, if indeed there ever be one, in which the members of an honourable and learned profession should condescend to the petty pleasure of expressing personal animosities. The truly scientific spirit will always rest content with the clear and forcible statement of his facts and deductions, knowing well, however simply he may have stated them, that they will if true live and be appreciated in spite of jealous detraction or angry diatribe. Although these remarks have been elicited by the perchloride discussion, which every one will doubtless with us condemn as a very bad model of scientific debate, we do not wish it to be thought that we either claim or wish to exercise the power of dictating what style of composition our correspondents shall adopt; nevertheless we cannot help feeling deep regret when we observe the heads of our profession either initiating or continuing a mode of writing in which personal disparagement forms far too prominent a feature.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, June 3rd, 1874.

E. J. TILT, M.D., *President, in the Chair.*

Acephalous Embryo.

Dr. John Williams and Dr. Clement Godson's report on the specimen exhibited by the latter at the last meeting was read:—

At the posterior border was a slight ridge similar to a margin of skin around a recent cicatrix, and there was a small, rough, hard tubercle, which projected beyond the surrounding surface, and on dissection this was found to be continuous with the vertebral column. From these appearances, the acephalous condition may be regarded as the result of amputation.

Tumour of the Uterus.

Dr. DALY, of Dalston, exhibited a specimen where a tumour the size of an orange occupied the fundus of the uterus. There was also a small ovarian cyst in the left side. The late Dr. Tyler Smith had removed a polypus from this patient some years back. Twelve months since she suffered from profuse flooding. Ice, gallic acid, and rest relieved this. The uterus was fixed in the pelvis. Between the attacks of hemorrhage there was profuse and continued fetid discharge. Vomiting had been almost persistent during the last four months of life, and nothing relieved it. There was extreme emaciation. Death resulted on June 2nd. The lower portion of the uterus was in a sloughy condition, and it was a question whether it was malignant or disintegrating fibroid.

Dr. PLAYFAIR thought it seemed to be a fibroid growth with malignant degeneration.

Dr. GODSON inquired as to the character of the discharge, the presence of pain, and the fixity of the uterus—points which would throw light upon the diagnosis.

Dr. HAYES asked what was the condition of the other abdominal organs.

Dr. BRUNTON inquired if ergot had been tried.

Dr. ROUTH suggested a microscopic examination of a section of the tumour.

Dr. DALY, in reply, stated that the uterus was fixed. The discharge was watery and offensive, the pain not as severe as usually met with in cancer. There was no cancerous infiltration; the bladder and rectum were not involved, though the latter was interfered with by the pressure of the tumour.

Dr. TILT requested Dr. Hayes and Dr. Potter to report further upon it.

Dr. TILT exhibited a specimen of the fetus where the placenta was attached to the head.

Dr. JOHN WILLIAMS exhibited a specimen of calcified fibroids of the uterus, the growths being distinct and well marked.

Dr. EDIS referred to a similar case, though somewhat more advanced, that he had exhibited to the Society in February, 1869, where some of them had commenced to slough, the patient dying from exhaustion.

A New Form of Pessary.

Mr. WM. ROSS JORDAN, of Birmingham, exhibited an intra-uterine stem with an inflatable india-rubber ball pessary attached, to keep the former in position, for the relief of flexions and displacements of the uterus.

The principal advantages consist in there being no tube attached, thus removing a source of much annoyance to the patient. It cannot be removed by the patient herself, and thus its constant use is insured. Whilst the stem keeps the uterus in its proper position and form, the elasticity of the ball or pad allows all the freedom of movement to the uterus which nature can possibly require. The pad can be distended to any degree and need not cause over-distension of the vagina. The pad being perfectly soft, gives a comfortable support to the cervix, avoiding the pain sometimes caused by the hard and inflexible vulcanite pessaries. It cures the flexion without simply changing it into a version.

The ball is inflated by inserting a moveable metal tube into a valve, injecting the air, and slightly rotating the tube, which closes the valve, and is then removed, leaving the pad permanently distended to any required extent. It does not interfere with coitus.

Dr. EDIS thought it was a very ingenious arrangement, but doubted whether it would be prudent in married patients to allow coitus, as the intra-uterine stem being pressed against the fundus might cause injury to the uterus.

Dr. BARNES reported that in Dr. Kesteven's case, exhibited at the last meeting of the Society, there was no fluid in the post-cranial bag—there was nothing in fact to add to the description already given.

Dr. HEYWOOD SMITH's report on Dr. Hayes's specimen was to the effect that though a considerable portion of the malignant mass was contained between the folds of the broad ligament, yet the site of its origin, whether in that situation or from the pelvic walls, there was not sufficient evidence to prove.

Separation of the greater part of the Cervix Uteri during Labour.

Mr. ROBERT GRAY, of Armagh, related a case. The patient had been in labour twelve hours when he first saw her; the head was then about halfway through the pelvis, surrounded by about half an inch or more of the anterior portion of the cervix uteri, which was thick, soft, and congested. It had a pulpy feel to the touch, much like the feel of solid clot of blood. Passing round to the posterior portion, it was separated from the body, leaving a ragged uneven margin; there was a slight oozing of blood from the vagina. The separated portion was removed, the forceps applied, and a living child delivered. There had been incessant vomiting before delivery. Opium and ergot were administered. She complained of smarting inside the vagina. Injection of water with Condy's fluid was resorted to daily. The pulse sank to 80, the temperature remaining steadily at 96° F. The attached ring separated completely on the fourth day. Recovery ensued. The only cause assignable for the laceration was pressure in the cervix between the head and pelvis.

On Lymphangitis in Pelvic Pathology.

Dr. TILT read a very exhaustive paper on this subject, his conclusions being condensed in the following propositions:—

1. Pelvic cellulitis, benign or septic, originates in the lymph spaces, and in the capillary lymphatics, that have been wounded in some lesion of the utero-vaginal mucous membrane.

2. Wherever situated in the pelvis, cellulitis follows in the same course, but varies in name and in symptomatology according to its topographical disposition, and to the organs and the tissues that circumscribe it.

3. From the patch of capillary lymphangitis implicated in a mucous membrane lesion, inflammation may spread to one or more of the nearest lymphatics, and may be benign or septic.

4. One lymphatic may pass on inflammation to another, so that a continuous chain of purulent lymphatics may extend from the septo-genetic lesion to the lumbar lymphatic glands, and such acutely inflamed lymphatics often inflame their surrounding cellular tissue, their glands, and proximate organs.

5. When lymphatic glands do not succeed in barring the progress of inflammation, they also inflame their surrounding cellular tissue, and may thus cause an internal bubo, wherever there be a pelvic lymphatic gland.

6. Occasionally peri-uterine inflammation has no other origin than this frequent cause of abscesses of the broad ligament.

7. Purulent lymphatics on their way to the lumbar glands may inflame the subserous cellular tissue in the iliac region and thus cause iliac abscess.

8. The subserous lymphatics and the peritoneum are so in-

timately united by physical contact and physiological action, that it is almost impossible for subserous lymphangitis not to cause peritonitis.

9. The subperitoneal lymphatics being continuous with, and contiguous to those of the ovary and the oviduct, they may be inflamed by subserous lymphangitis, particularly when it is septic.

10. The contamination of the blood by lymphatic pus leads to the inflammation of those parts that are in physiological connexion with the lymphatic system, such as the serous and synovial membranes and the spleen, whilst phlebitis more frequently causes metastatic abscesses, if it be not their sole cause.

11. Though often overlooked in post-mortem investigations, sporadic puerperal lymphangitis is not uncommon, but is more frequently met with in connexion with, and eclipsed by phlebitis.

12. The worst cases of puerperal lymphangitis have their modified counterpart and their subdued presentment in non-puerperal pelvic pathology, and more frequently than is admitted, lymphangitis is the cause of speedy death from uterine operations.

13. Whether women be poisoned by puerperal lymphangitis or puerperal phlebitis, the general symptoms are the same in nature and in intensity, and the local symptoms vary according to the amount and to the variety of its primary and of its secondary lesions.

14. The increase in size and in number of pelvic lymphatics during pregnancy, and their increased functional activity, strongly support the rule not to operate on pregnant women.

15. As the liability to puerperal lymphangitis is in direct proportion to the number and to the gravity of lesions inflicted on the utero-vaginal mucous membrane by tedious labours, it is advisable to shorten by the use of the forceps, according to modern practice.

16. The bathing of a puerperal wound in an ichorous discharge is so dangerous that disinfecting vaginal injection should be made so soon as the lochial discharge becomes in the least offensive.

17. The innocuity of injecting a solution of tincture of iodine into the womb immediately after delivery, and of a solution of perchloride of iron very soon afterwards, warrants the injunction to inject into the womb some strong disinfecting substance whenever the lochial discharge be fetid.

18. The frightful mortality that has attended some epidemics of puerperal lymphangitis justifies the horror of large maternities entertained by the profession.

Dr. PALFREY did not altogether agree with the author as regards the frequency of this disorder. It was, without doubt, more common in maternity hospitals than generally believed; and yet, though he was attached to one, he had never seen a case; and in the London Hospital they had never lost one. No proper comparison could be made between the London and Paris hospitals, the ventilation and hygienic arrangements in the latter contrasting unfavourably with the

former. He would ask whether the author advised injecting iodine into the uterus three or four hours after labour, and whether there was no fear of the fluid passing through the Fallopian tubes into the peritoneum. He had seen one case where it was fatal. In another, Dr. Head injected the perchloride of iron into the non-pregnant uterus; death occurred shortly after, and iron was detected, post-mortem, in the peritoneal cavity. He thought it was not prudent at any time to inject fluids like tincture of iodine and the perchloride of iron into the uterus; the results were often most disastrous. He would ask whether the author considered pelvic cellulitis and lymphangitis to be one and the same condition. He had never seen glandular enlargement in the pelvis in pelvic cellulitis, and it was not, as a rule, a fatal disorder. Remembering that what the author taught would go forth to the world, he desired to express his dissent to the views enunciated respecting the harmlessness of intra-uterine injections. If it was so difficult for fluid to travel along the Fallopian tubes, how is it that semen often traverses them, and we get extra-uterine pregnancy as the consequence? He considered it was very easy for fluid to pass. Apropos of a remark of the author that every one had backed some form of intra-uterine stem, he begged to say that he himself had never done so. He had incised the cervix in some 300 cases, and there was no operation so successful. It was one of the grandest operations we had for the relief of suffering and the cure of sterility.

Mr. WM. ROSS JORDAN considered the Fallopian tubes different in the non-pregnant uterus and in the pregnant one. Semen would pass in the one but not in the other. He knew of a case where Condyl's fluid injected into the uterus had found its way into the peritoneum, and caused serious consequences.

Dr. SAVAGE looked upon every inflammation as a lymphangitis. There was no part of the body in which cellular tissue was absent, and this was permeated by radicles. It was open to question whether matter was propagated beyond glands through the lymph tubes. In the case of a punctured wound of the extremity, the lymphatics were often inflamed up to the glands in the axilla or groin, as the case might be, but they did not contain pus. The lining membrane of the uterus contained the same kind of radicles as other cellular tissue. Slight operations were often followed by death. In division of the cervix he had seen death in three cases occurring within nine days. Lymphangitis was very frequent. Though fluid injected into the uterus can gain access to the Fallopian tubes, yet in the case of the spermatozoa it was different. They did so by means of cilia. He had never used iron or iodine in puerperal cases, though he had in certain forms of fibroid. He thought there were some omissions in the paper, but still it was a valuable contribution on the subject, and he had learnt a great deal.

Dr. TILT, in reply, stated that he had not represented the belief in the frequency of lymphangitis to be generally admitted in France and

Germany, but he maintained that if half a dozen earnest workers could find a considerable number of cases of puerperal lymphangitis in several of the Paris hospitals during the last four years, similar cases must certainly occur in London hospitals, and he would beg hospital men to look to the lymphatics in cases of speedy death after operations in the pelvic organs. He had not denied the possibility of some fluid passing from the oviducts to the peritoneum, and he was glad to have elicited trustworthy evidence of two cases in which some of the perchloride of iron injected into the womb had been found in that part of the peritoneum that surrounds the *fimbriae*, but he maintained that this was of exceedingly rare occurrence, and that if otherwise such cases would not be quite exceptional, and they would have frequently occurred in Paris, where, during late years, it has been the practice in some hospitals to wash out the womb with a strong solution of alcohol or carbolic acid whenever the lochia became fetid. He therefore believed that rather than let fetid secretions remain pent up in the womb after delivery, it was better for a patient to run the infinitesimal chance of the disinfectant passing into the peritoneum. He was fully aware of the value of surgery in uterine therapeutics, and believed the present tendency was to place too great a trust in surgical measures for the treatment of diseases of women. In conclusion he begged to thank the Society for their patient attention to and reception of his paper.

OBSTETRICAL SOCIETY OF EDINBURGH.

Meeting, April 8th, 1874.

Dr. J. MATTHEWS DUNCAN, *President, in the Chair.*

Strangulation in Utero.

Dr. CUTHBERT showed a rare and interesting case, and the following are the notes of the same:—

Mrs. P., aged thirty, a light-haired, stout, and well-formed woman, the mother of several healthy children, miscarried for the second time, on 29th March, 1874.* Her last menstruation was on 17th December, consequently the fetus was about $3\frac{1}{2}$ months old. It was perfectly healthy and well developed. No reason could be assigned by the patient for the accident. On examining the fetus, I found the funis coiled twice round the neck, and, under the coiling, it was tightly tied in a single knot. The part of the funis from the umbilicus to the neck was completely on the stretch, and its whole length from the insertion in the placenta to the umbilicus was about 17 inches, or $2\frac{1}{2}$ times the length of the fetus. The part continuous

* Her previous miscarriage took place about four years ago.

with the fetal circulation was round, and of a natural size, but the other part—viz., from the neck of the fetus to the placenta, was small and cord-like.

There can be no doubt that the death of the fetus, and consequently the miscarriage, was caused by the tying and coiling of the funis round the neck. Probably it was also hastened as the fetus grew larger, by putting the smaller part of the cord on the stretch, which would tend to tighten the knot and coils; at the same time, it would also stop the circulation.

Note on the Chief Directions and Extents of Uterine Shrinking; specially at the Time of the Complete Expulsion of the Contents of the Gravid Uterus.

By Dr. J. MATTHEWS DUNCAN.

The subject was quite a new one, so far as he was aware. Shrinking and contraction, he pointed out, were not identical. Action or contraction was the force or condition that produced shrinking. This latter term expressed one result of action or contraction.

Shrinking of the muscular wall of the uterus generally caused no *rugæ* or sulci in the peritoneum, this membrane being sufficiently elastic to follow the shrinking uterus without forming folds or *rugæ*. But, under the influence of inflammation or other conditions, the peritoneum was deficient in elasticity, and did not shrink co-ordinately with the subjacent muscular tissue, and then it formed ridges and furrows of various kinds. Of these Dr. Duncan described three kinds, all of which were seen in the preparations he exhibited.

The furrows and ridges would of course be in a direction transverse to the direction of the shrinking, and their qualities might indicate the extent of the shrinking, its direction, and its position. The preparations he exhibited showed that this shrinking was not uniform in extent or direction in different parts of the uterine wall.

By accumulation of, and generalization from, observations, valuable knowledge of this important subject would certainly be obtained.

The extent and duration of the shrinking of a uterine wall as a whole might be made out by mere measurement, there being fixed points to measure from. But Dr. Duncan knew no other method than this which he now proposed, of discovering or measuring the extents and directions of the shrinking of parts of a uterine wall.

Dr. MACDONALD said that Dr. Duncan had opened up an entirely new field of inquiry, and he hoped one which might by-and-by be fruitful in practical results. As far as he understood the paper, Dr. Duncan meant by uterine shrinking the gross effect of, or the summation result of, combined contractions of the entire contractile tissues of the uterus. Now Dr. Duncan's observations seemed to him (Dr. M.) to be confirmed in this far, that the greatest shrinking, as indicated by the furrows observed by Dr. Duncan, took place

in the situations in which our knowledge of the anatomy of the uterus would lead us to expect it. Thus, in the body of the organ, the preponderance of muscular tissue was known to be more or less transverse; and here Dr. Duncan had observed the preponderance of longitudinal furrows, which would be at right angles to the pull of the transverse fibres; whilst towards the cervix, where we know there exist strong longitudinal fibres, Dr. Duncan had noticed that transverse furrows predominated.

Pelvimetry: a Method of Estimating the Conjugata Vera.

By J. R. HARDIE, M.B., &c.

Authors are generally agreed that in cases of contracted pelvis it is the conjugata vera to which the attention of the accoucheur is to be specially directed. Here, as a consideration of one of the most elementary mechanical problems connected with the development of the female pelvis indicates, we are likely to meet with the evil results of a departure from a healthy condition of the bones during the growth of the skeleton; here, too, there is little room to spare, and any diminution in size, even though ever so slight, is of more serious moment to the subject of it than an equal encroachment on any of the other diameters of the pelvis; besides, both extremities of this diameter would appear to be a seat of election of growths of various kinds, producing a contraction of its dimensions. Small wonder, then, that many have been the attempts to introduce methods having for their object the ascertaining during life of the size of the conjugate. Of these, finding out the external conjugate or the diameter of Baudelocque by means of calipers, and then making an average deduction, ascertaining the true conjugate and diagonal conjugate by means of the hand, fingers, or pelvimeters, are the most important. From the first little reliable information is to be gained in the majority of slight cases, and internal pelvimetry by means of instruments is manifestly so dangerous and uncertain a mode of procedure, that practically we are forced to have recourse to the hand.

By means of the extended hand, or closed fist, introduced into the passages, a pretty accurate and valuable estimate can be formed of the size of the true conjugate; but this, for obvious reasons, is almost solely available during labour, when the brim is not occupied by the fetal head, or immediately after labour; its application in the non-pregnant state, or during the course of a pregnancy, would be accompanied by many difficulties, if not absolutely dangerous.

By ascertaining the dimensions of the diagonal conjugate with the finger, we can obtain reliable data from which to estimate the true conjugate. This method is perhaps the simplest and most generally applicable which has hitherto been at the disposal of accoucheurs, and can be made use of at any time in the non-pregnant state, during pregnancy, during labour so long as the head is situated above

the brim, and after delivery. Where much contraction exists it is easy of application, and the information to be gained from it is of great value; on the other hand, however, when the contraction is slight, so much straining effort on the part of the examiner is necessary to push the soft parts upwards and aside, in order to reach the promontory of the sacrum, as to greatly diminish its value in practice. During and after labour, when the hand can be introduced with comparative impunity, the direct method is to be preferred to this one.

From these observations as to the means already at our disposal, it will be seen that in a certain class of cases—viz., those in which there is a minor degree of contraction in women who have borne no children, and in whom therefore direct internal pelvimetry could not with propriety be used—a more accurate method is desiderated; and it is with the notion that what is here advanced is a step in that direction that it is now brought forward. The method about to be described may be said to consist in directly ascertaining the dimensions of the conjugata vera by external manipulations, thus differing from all other modes. It is, in fact, measuring the conjugate plus the compressed anterior abdominal wall.

The examination is proceeded with as follows:—The bowels and bladder having been previously emptied of their contents, the patient is placed in the ordinary position for conducting an external examination of the pelvic viscera, on her back, with the thighs flexed on the abdomen. A point about an inch below the umbilicus, and in a line with it, is selected, over which the right hand is placed, and the anterior abdominal wall adpressed to the spinal column. By means of this manœuvre the situation of the promontory of the sacrum, which it is to be kept in mind has no immediate superincumbent soft parts, is readily ascertained. When the position of the promontory has been accurately made out, one extremity of an ordinary measuring tape is conducted to it, and kept firmly in contact with it by means of the thumb of the left hand, while with the right the tape is brought downwards and forwards to the upper and inner border of the symphysis pubis. In favourable cases this is all that is necessary, the inclination of the pelvis and the absence of soft parts immediately over the promontory of the sacrum rendering these manipulations less difficult than would at first sight be supposed. When the anterior abdominal flap is loaded with adipose tissue, it is frequently necessary to have an assistant, who presses the abdominal wall into the cavity of pelvis, which greatly facilitates accurate observations being made. To the measurement thus obtained has to be added the thickness of the firmly-compressed anterior abdominal wall; this I have found to be about 1-4th of an inch in healthy and ordinary females of child-bearing age.

The most favourable cases for the application of this method are those in which the abdominal wall is thin and lax; the most unfavourable are those in which it is loaded with fat and tense. In

cases where there is much tension of the parietes the exhibition of an anesthetic is of service. The advantages I would claim for it are :—

1. The ease with which it can be applied.
2. The reliability of the information to be gained from it.
3. The readiness with which it is submitted to by the patient.

The method described has marked limits of applicability. When the others fail it is most serviceable, and *vice versâ*. It is precisely in those cases where the internal methods of calculating or ascertaining the true conjugate cannot be applied with advantage that this one becomes available. It is inapplicable—

1. In advanced pregnancy.
2. During labour at or near full time.

It is of value—

1. In giving advice before marriage.
2. During the early months of pregnancy.
3. After labour as to the course to be pursued in subsequent deliveries, especially after first cases.

These remarks are based on twenty cases examined and measured during life, in which the accuracy of the determination was verified by inspection after death.

Dr. DUNCAN said that the Society was indebted to Mr. Hardie for his paper ; but he should like to point out a deficiency—viz., the absence of any statistics embracing post-mortem measurement.

Mr. HARDIE said he had confirmed his measurements during life by twenty post-mortem ones.

OBSTETRICAL SOCIETY OF DUBLIN.

Meeting, May 9th, 1874.

EVORY KENNEDY, M.D., *President, in the Chair.*

On Puerperal Convulsions.

By THOMAS MORE MADDEN, M.D., M.R.C.S.E.

THERE are few obstetric questions of greater interest than the etiology, prevention, and treatment of puerperal convulsions. Some advance has been recently made in the prophylaxis and management of this disease, but its causes remain *sub judice*, and little can yet be added with certainty to what Hippocrates wrote :—"Σπάσμος ἢ ὑπο πληρώσιος ἢ κενώσιος : " though from this time to the present almost innumerable theories had been applied to this subject.

I shall now lay before the Society the history of a few of the cases of puerperal convulsions that have come under my notice in hospital and private practice, together with some general observations on the disease, and a reference to the principal views that have prevailed at different times as to their nature and treatment. Several of the

opinions thus referred to, though quoted from writers now seldom consulted, are nevertheless of interest. For, in investigating subjects like the present, which have long engaged and baffled inquiry, it is surely not unworthy of a scientific society, however practical and devoted to progress, occasionally to look back to what has been done by those who have been pioneers in those obscure paths of inquiry which we would ourselves explore.

Convulsions are, with the exception of rupture and inversion of the uterus, the most dangerous as well as the least frequent of the complications of labour. The relative frequency as well as the danger of this disease is shown by the annexed table (p. 238), compiled from Reports of the Masters of the Dublin Lying-in Hospital.

I. *Etiology of this disease.*—The theory that puerperal convulsions are reflex actions excited by cerebro-spinal or medullary irritation, of uterine origin, and transmitted through the ganglionic cells in which the reflex nerves terminate, has been formulated by several recent writers, but may be traced back to Laurence Joubert, who, during the middle of the sixteenth century, was Professor of Medicine in the University of Montpellier. In his essay on convulsions, this once well-known author not only controverted the Hippocratic aphorism already quoted, but, moreover, asserted that the cause of convulsions is irritation, and that only by the removal of the source of this irritation can the paroxysms be arrested.*

The analogy between the abnormal nervous action thus excited and the effects of an electrical discharge has been remarked by obstetricians as well as physiologists from the time of William Hunter. The proximate cause of this disease must primarily affect the central excito-motor portion of the nervous system. Reflex actions are now generally referred to the medulla oblongata, and the researches of Dr. Brown-Séquard support the opinions of Van der Kolk, Kussmaul and Tenner, as well as those of Dr. Marshall Hall and other older writers, in assigning the upper part of the spinal cord, the medulla oblongata, and pons Varolii, where the roots of the first motor nerves have their origin, as the probable starting point of the convulsive action in these cases. In proof of the influence of physical impressions on the medulla oblongata in producing convulsive action, I may refer to two cases of acephalous fetuses which came under my observation some years ago in the Lying-in Hospital. One lived for twenty minutes, and the other for an hour and a half after birth, and in both it was remarked that the slightest pressure on the bulbous expansion of the medulla oblongata, which supplied the place of the brain, produced violent general convulsions.

The older British obstetricians, with a few exceptions, held that puerperal convulsions were generally occasioned by determination of blood to the head, and should be treated by blood-letting. This was

* Joubert, "De Convulsionis Essentia et Causis," Op. An. p. 219. Ed. Antwerp. 1500.

TABLE.

Date.	Master.	Deliveries.	Convulsions.	Primiparae.	Twin Births.	Result to Mother.		Sex of Children.		Still-born.	Mode of Delivery.				
						Recovered.	Died.	Male.	Female.		Natural.	Forceps.	Version.	Vectis.	Craniotomy.
1787-1793	Dr. Clarke	10,387	19	16	—	—	—	—	—	—	—	—	—	—	—
"	Dr. Collins	16,654	30	29	2	25	5	20	10	14	15	6	—	—	8
1842-1845	Dr. C. Johnson (Reported by Drs. Hardy and M'Clintock.)	6,702	13	10	—	10	3	6	7	6	6	2	—	1	4
1847-1854	Dr. Shekleton (Reported by Drs. Johnston and Sinclair.)	14,748	63	49	5	50	13	36	33	45	36	24	2	—	7
1868-1869	Dr. Johnston	1,159	4	—	—	—	—	—	—	—	—	—	—	—	—
1869-1870	Do.	1,087	5	2	1	4	1	4	2	4	—	3	1	—	1
1872-1873	Do.	1,191	4	3	—	—	4	—	—	—	—	4	—	—	—
	Total .	50,928	138	109	8	89	36	66	52	70	51	39	3	1	20

the teaching of Scott,* of the Hamiltons,† Smellie,‡ Denman,§ Bland,|| Foster,¶ William Hunter, and other eminent men-midwives of the eighteenth century. The same theory being propounded by Davis,** Ryan,†† Blundell,‡‡ Burns,§§ Maunsell,||| and others, was, down to a comparatively recent period, generally accepted as a sufficient explanation of the causes of convulsions. In America, too, according to a very able writer, "we find no other idea but congestion of the head is entertained as the cause of puerperal eclampsia."¶¶ And this theory is reiterated in the principal manuals used by students in that country.*** I might easily add a much longer list of Continental as well as of British and American authorities to the same effect. But fully enough have been adduced to prove the widespread acceptance of this opinion.

Pregnancy may, to some extent, be regarded as a predisposing cause of cerebro-spinal congestion. The blood at this time is not only increased in quantity, but also contains more fibrine than usual. As gestation advances the enlargement of the uterus increases the tension of the cerebral vessels, which attains its maximum during the violent efforts of parturition when puerperal convulsions most frequently commence.

It has been argued by Dr. Inglis and others, that the circumstance of eclampsia commonly beginning at night is a proof that the disease is connected with congestion of the brain. This fact does not, however, appear to me to support the opinion thus founded upon it.

* "Lectures on Midwifery." By Robert Scott, M.D. 1775. P. 113.

† "A Treatise on Midwifery." By Alexander Hamilton, M.D. P. 199. Edinburgh. Dr. Hamilton's Lectures on Midwifery, in the University of Edinburgh, 1815-16; reported by Dr. M'Keever. MS. P. 65.

‡ "A Collection of Cases and Observations in Midwifery." By William Smellie, M.D. Vol. ii. Collect. xviii. No. 5. London, 1779.

§ "Introduction to Midwifery." By Thomas Denman, M.D. P. 430. Ed. Edinburgh, 1781.

|| "On Human and Comparative Parturition." By James Bland, M.D. P. 138. London, 1794.

¶ "Principles of Midwifery." By Edward Foster, M.D. P. 118. London, 1781.

** "Principles and Practice of Obstetric Medicine." By D. D. Davis, M.D. Vol. ii. P. 1027. London, 1836.

†† "A Manual of Midwifery." By Michael Ryan, M.D. P. 519. Third Edition. London, 1831.

‡‡ "Principles and Practice of Obstetric Medicine." By James Blundell, M.D. P. 424. London, 1831.

§§ "Principles of Midwifery." By John Burns, M.D. P. 519. Tenth Edition. London, 1843.

||| "The Dublin Practice of Midwifery." By Henry Maunsell, M.D. Edited by Thomas More Madden, M.D. P. 194. Sixth Edition. London, 1871.

¶¶ "Principles and Practice of Obstetric Medicine and Surgery." By Francis Ramsbotham, M.D. P. 449. First Edition. London, 1844.

*** "On Puerperal Eclampsia." (Review), *American Journal of Medical Science*, April, 1869. P. 437. "Conspectus of Medical Sciences." Edited by H. Hartshorne, M.D. P. 997. Philadelphia, 1869.

For, it is now generally held that during sleep the brain is in a comparatively bloodless condition ; and the blood in the encephalic vessels is not only diminished in quantity, but moves with diminished rapidity.*

Convulsions are not confined to plethoric patients ; and it is unquestionable that anemia, whether resulting from a sudden loss of blood by hemorrhage, or from the gradual deterioration of the vital fluid by disease, is conducive to eclampsia.

Nor is pregnancy, even when apparently accompanied by plethora, actually so in most cases. On the contrary, the blood, though increased in quantity, is then more generally impoverished, containing fewer corpuscles, less albumen, and a larger proportion of water, by which the circulation is more and more embarrassed as the uterus enlarges. This vascular tension occasionally results in serous effusions into the areolar tissue or serous cavities, and the discharge of albuminous urine, by which a considerable drain of the nutritive elements of the blood is produced.

The connexion between general dropsy and convulsions was pointed out by Dr. Hamilton, of Edinburgh, in the year 1800. Dr. Blackwell next showed that albuminuria was present in these cases ; and about the year 1835 it was discovered by Dr. Bright that this was connected with granular degeneration of the kidneys. The field of investigation thus opened was further explored, with a special reference to the pathology of puerperal eclampsia, by Dr. Lever, M. Robin, M. Becquerel, M. Frerichs, Professor Braunn, and others, by whom it was proved that the convulsions of pregnancy are frequently associated with dropsy, marked by albuminuria, and attended by the diminished excretion of urea and uric acid, and the consequent retention of these compounds in the system.

In cases of this kind the urine is not invariably albuminous. I have examined this secretion in six instances of convulsions during labour, and in only four of them was albumen discovered. On the other hand, I have found albuminuria in pregnant women who had no subsequent attack of eclampsia.

In two cases of sthenic convulsions I had an opportunity of testing the blood for excess of urea, but was unable to detect any appreciable trace of this salt on a microscopic examination of the evaporated serum, treated in the ordinary manner with nitric acid. Either urea or carbonate of ammonia, resulting from its decomposition, are frequently present to an abnormal extent in such cases ; though both these salts may be injected into the blood of a healthy animal without producing convulsions.

* Dr. Inglis, "Facts and Cases in Obstetric Medicine," p. 7 : London, 1836. Mr. Durham, "On the Physiology of Sleep," *Guy's Hospital Reports*, p. 24 : London, 1860. T. More Madden, "On Dreaming considered in Relation to the Study of Insanity," read before Med. Soc. Coll. Physicians, Dublin ; *Medical Press and Circular*, 1869.

That convulsive action may be occasioned by blood-poisoning is well known in other diseases in which—as, for instance, in small-pox, severe jaundice, morbus Addisonii, Bright's disease, and during recovery from scarlatina—convulsions occasionally result from this cause. And during pregnancy a similar effect is not improbably produced by the pressure of the gravid uterus on the renal emulgent veins interfering with the functions of the kidneys, as well as acting as a cause of cerebro-spinal congestion.

In considering the causes of puerperal eclampsia, we must bear in mind the various conditions under which ordinary epileptiform convulsions occur. Many agree with Trousseau* in regarding these as identical; and certainly Cullen's definition of epilepsy applies to the disease we are now considering—*musculorum convulsio cum sopore*.† Dr. Radcliffe‡ has shown that epileptiform convulsions occur in connexion with almost every variety of cerebral disease as well as in the moribund state, and as a consequence of reflex irritation.

That great hemorrhage is productive of convulsions is known to every accoucheur who has had to witness a case of fatal post-partum flooding; therefore it is unnecessary for obstetricians at least, to dwell on the elaborate experiments by which this fact has been established. The convulsions produced by hemorrhage, like those arising from the circulation of impure or vitiated blood, result from the interruption of that regular and sufficient supply of healthy blood to the nervous centres which is essential to their normal action, and the sudden withdrawal of which by hemorrhage, or its gradual deterioration by disease, are alike probable causes of these irregular manifestations of disordered nerve force.

Putting aside the distinction between the proximate and the predisposing causes of this disease, which I believe are so inextricably interwoven that it would be impossible to consider them separately, from the foregoing abstract of the different opinions which have prevailed on this subject, read by the light of my own clinical observations, I would venture to draw the conclusion, that in the causation of puerperal convulsions a variety of circumstances have a share, and must be taken into equal account. In the first place the disease is obviously connected not only with the state of the uterus itself, and with that of the adjoining organs during gestation, but still more so with the remarkable condition of nervous susceptibility peculiar to pregnancy. In the cases under consideration, the cerebro-spinal nervous centres are usually more or less congested, even when the patient's general condition is anemic, and are irritated by the circulation of vitiated blood containing some non-eliminated *materies morbi* through their vessels, producing a direct toxic effect on the

* Trousseau, "Clinical Medicine," vol. i. p. 32.

† Cullen, "Synopsis Nosologiæ Methodicæ." Edit. 3. 1780.

‡ Radcliffe, "On Epilepsy and Convulsive Affections." Second Edition, p. 262.

excito-motor nerve substance of the brain and medulla oblongata, and stimulating the hyperesthetic condition just referred to till the latent excitability becomes so intense that it needs only the addition of uterine irritation, such as the first pain of labour, to cause the pent-up nerve force to burst into uncontrollable action, and produce the violent reflex muscular spasms that constitute puerperal convulsions.

The season, the age of the patient, her temperament, and the fact of its being her first pregnancy or not, have also a considerable influence in the causation of this disease.

It is a remarkable fact, that puerperal convulsions generally attack a number of individuals almost simultaneously. The disease is by no means a common one; and yet, of the few instances of it which I have seen during the last six years, no less than three occurred within one fortnight. Madame Lachapelle and Dr. Ramsbotham both make a similar observation. The former says—"When one of our women is taken with convulsions, we rarely fail to have soon afterwards others in the same state." The latter observes—"I have repeatedly remarked amongst the numerous patients of the Royal Maternity Charity, as well as amongst others to which I have been accidentally called, that several cases have occurred soon after each other."* And it certainly seems not improbable, as was long since conjectured by Smellie† and Denman‡, whose opinions have been confirmed by M. Andral,§ Dr. Inglis, as well as by Dr. Hall Davis,|| and other recent writers, that the explanation of this circumstance will be found in the occurrence of some peculiar electrical condition of the atmosphere at the time these manifestations of disordered nervous action are most rife.

II. *Presentation*.—In almost every instance of puerperal eclampsia that I have met with, the presentation was natural; and the experience of most other practitioners is similar to my own on this point.

III. *Plural Births* are most frequently complicated with convulsions.

IV. *Influence of Convulsions on Parturition*.—Whenever eclampsia occurs towards the end of pregnancy, labour is produced by the disease. If it commences after labour has set in, the delivery is generally rather accelerated by their complication.

V. *Effect of Mental Impressions in Causing Convulsions*.—This has been remarked by all obstetricians since the time of Denman, by

* Dr. Ramsbotham, "Obstetric Medicine and Surgery," p. 451. London, 1844.

† Smellie, "Midwifery." Vol. ii. p. 285. London, 1779. Vol. iii. p. 161. London, 1789.

‡ Denman, "Introduction to Midwifery."

§ M. Andral. "Clinique Médicale." Translated by D. Spillan, M.D. P. 77. Lond. 1836.

|| Dr. Hall Davis, "On Puerperal Convulsions." "London Obstetrical Society," vol. xi. p. 274. London, 1870.

whom it was most ably and fully discussed. Anxiety of mind, depression of spirits from reverse of circumstances, sudden shocks, are conducive of eclampsia; and some one of these, or still more commonly the combination of shame, anxiety, and sorrow in unmarried women, were clearly predisposing causes of this disease in almost every case that I have seen.

VI. *Primiparæ are most liable to Convulsions.*—Thus, in the cases of eclampsia which have come under my observation, five occurred in cases of first labour, and three in subsequent confinements. The same remark has been made by nearly every other writer on the subject, and is borne out by the Table I have constructed from the reports of the Rotunda Hospital, by which it appears that of 138 patients attacked by convulsions, 109 were *primiparæ*, and only 29 were *multiparæ*.

VII. *The Classification of Puerperal Convulsions* into hysterical, epileptic, and apoplectic, may, I think, be entirely disregarded. This disease differs essentially in its nature and causes from either epilepsy or apoplexy, being a convulsive affection *sui generis* peculiar to women who are either pregnant or soon after parturition.

The hysterical form of puerperal convulsions being merely ordinary hysteria occurring in the early months of gestation, though possibly excited by reflex-uterine irritation, requires no peculiar treatment nor further notice. Epileptiform and apoplectiform convulsions are identical in their origin and nature, approaching each other in widely varying degrees in different cases, and influenced in their symptoms by the severity of the attack and the constitutional state of the patient, rather than by any essential difference in the nature of the disease.

VIII. *Premonitory Symptoms.*—In the majority of cases puerperal convulsions are preceded by edema of the upper extremities, face, and eyelids, pain in the lumbar region, and albuminuria. For several days before the attack the patient generally complains of malaise, followed by headache, giddiness, confusion of thought, or peculiar irritability of temper, similar to that which is occasioned by the circulation of lithic acid in the blood, and which precedes an attack of gout.

IX. *Symptoms of Asthenic or Epileptiform Puerperal Convulsions.*—The phenomena of the complete seizure are somewhat similar to those of an ordinary epileptic fit. Commencing with twitching of the muscles of the eyelids and eyeballs, the convulsions soon increase in violence, extending to every part of the body (though in every case that I have seen they were more marked on one side than on the other), and recur at irregular intervals, in clonic spasms of varying duration and intensity. In anemic patients throughout the attack the face may be cool and pale, the eye glistening, and the pupils contracted. In the majority of cases the patient's state during the commencement of the attack is that of vascular depression rather than of vascular excitement; the extremities being cold, the

countenance pallid, and the pulse, though quick, weak and compressible. But generally as the convulsions recur more frequently, the impeded respiration and consequent non-aëration of the blood induces symptoms of venous congestion; the face becomes dusky and livid, the lips and *ala nasi* turgid, the breathing hissing or stertorous, the pulse full and labouring; and thus the disease passes from the first into the second stage, or from the so-called epileptiform into the so-called apoplectiform convulsions.

X. *Sthenic or Apoplectiform Convulsions*.—In plethoric women the disease general presents, *ab initio*, the apoplectiform character, and may commence by a sudden violent convulsion, after which the patient falls into a comatose state, in which she lies, as well described, “like a person dead drunk,” the convulsions meanwhile recurring at irregular intervals. Her face is congested, the carotids and temporal arteries throb visibly, the respiration becomes stertorous, the pulse slow and full, the limbs placid, and no reflex action responds to any external stimulation. After remaining for an uncertain time in this condition, midway between life and death, under favourable circumstances the convulsions may cease, and the patient at last slowly regains consciousness, and awakes once more to renewed vitality, though her mental powers will probably remain clouded for some days. But, on the other hand, the coma may become more profound, the pulse slower and more labouring, the respiration more embarrassed, the face more pallid, the extremities colder, and the skin covered with a clammy moisture, until at length “the last sad scene of all” is closed by a violent and final convulsion.

These convulsions may occur at any time of pregnancy, during labour, and within the puerperal period. Most commonly they begin with the dilatation of the os.

XI. *Treatment*.—The treatment of puerperal convulsions must be considered in reference to the state of the patient in each instance.

In all cases prevention is better than cure, and hence the importance of an early recognition of the premonitory symptoms, as by timely prophylactic measures we may sometimes succeed in warding off impending convulsions.

In this prophylactic treatment our objects are—first, to relieve the kidneys; secondly, to assist the efforts of nature to purify the blood; and thirdly, to soothe the nervous irritability peculiar to these cases. The first object may be attempted by cupping and fomentations over the loins, the free use of diluents, and the cautious administration of mild diuretics, and especially by colchicum, in small and guarded doses. The second intention may be fulfilled by saline aperients as well as by diaphoretics, if the skin be harsh and dry; and the third by sedatives, especially bromide of potash and belladonna.

The therapeutic indications in cases of puerperal eclampsia are—first, to arrest the convulsive action; and, secondly, to remove the cause of its recurrence.

During the convulsions the ordinary precautions, such as loosening

the patient's clothing, and preventing her from biting her tongue, by inserting any suitable substance between the teeth, or from injuring her person in any way by proper restraint, should, in the first instance, be attended to.

One of the most effectual means of shortening the paroxysms is cold affusion in a small stream from a moderate height on the head and face. This remedy is of considerable antiquity, being recommended by Valescus, of Taranta, in a work* originally published in the year 1482. It was re-introduced into practice on the authority of Denman, who derived great benefit in such a case by merely sprinkling his patient's face with cold water during the paroxysms—a very different practice, I may observe, from the copious cold affusions now recommended. In the asthenic form of eclampsia this remedy should be used cautiously. It should not be employed except during the convulsions, nor persevered in so long as to depress the circulation unduly.

In all cases the *primæ viæ* should be unloaded, as soon as the convulsions commence, by a bolus of calomel and jalap, or by a drop of croton oil placed on the tongue. Enemata of assafetida and turpentine, suspended in thin gruel, may also be resorted to, and repeated if necessary.

The head should be shaved if possible, and the back of the scalp freely painted over with liquor epispasticus, whilst, at the same time, a bladder loosely filled with ice may be laid over the front of the head. The feet and calves of the legs should be enveloped in mustard poultices, until a decided rubefacient effect is produced.

In cases of sthenic puerperal convulsions, *venesection* is, notwithstanding the disusage into which blood-letting has fallen in all other diseases, still the only remedy of undoubted efficacy in subduing the convulsive action. If the patient be plethoric, and her pupils be contracted, showing cerebral congestion, we may, as a rule, bleed. If, on the contrary, the pupils are dilated, the condition of the brain may be considered as anemic, and blood-letting would probably be out of the question. This rule is liable to many well-known causes of exception, as the state of the pupil may normally vary widely in different individuals, as well as be affected by various toxic agents.

The amount of blood that may be taken from a plethoric woman, suffering from eclampsia, should be measured by the patient's condition and the effect produced, rather than by the quantity abstracted. In one case I took nearly forty ounces of blood, and within a few hours twelve ounces more, but without any benefit. Generally, however, a very much smaller bleeding will suffice, and, as a rule, not more than from eight to twelve ounces of blood should be taken.

Chloroform is still regarded by some authorities as the remedy *par excellence* for puerperal convulsions: and though, according to my

* Valescus de Taranta, "Philon. Pharmaceut. et Chirurg." Lib. i. c. 27, p. 92. Franca, 1599.

experience, this is an exaggerated estimate of the value of this anæsthetic, its inhalation is of unquestionable use in many cases. In hysterical convulsions, if sprinkling the face with cold water does not suffice, a few whiffs of chloroform will generally cut short the attack. In true puerperal convulsions, however, in which I have used chloroform pretty extensively in the manner originally suggested by the late Sir James Simpson, and have kept patients under its influence for several hours at a time, it requires to be used with great caution, its exhibition being obviously contra-indicated where either the circulation is depressed, or where there is any tendency to apoplectiform symptoms. But in suitable cases I have found chloroform most serviceable in subduing the convulsions and prolonging the intervals between them. If it be inhaled only during the paroxysm, chloroform appeared to have no effect in shortening the attack; but if exhibited before its expected return, it often prevents its recurrence for hours together, and gains time, during which the labour may be completed, and the patient placed in comparative safety.

Chloral was suggested by myself in a paper published four years ago, and has since been employed with varying success by other practitioners in England and America.

Opium, though recommended upon high authority,* is, in my opinion, clearly contra-indicated in all cases of eclampsia during labour in which there is any tendency to apoplectiform symptoms.

The Tincture of Veratrum Viride has been used as a substitute for blood-letting in cases of puerperal convulsions by Dr. Fearn, of Brooklyn. Dr. Fearn exhibited this remedy in very large doses in ten cases of this kind—"there being," he says, "no danger from the medicine as long as the convulsions continue."† I should, myself, prefer some safer plan of treatment than these heroic doses of so powerful a drug.

Belladonna was originally introduced into practice in these cases by M. Claussier fifty years ago,‡ and has again been recommended by recent writers. My own experience in those cases in which I have seen it tried, would not lead me to attach any value to this drug in the treatment of eclampsia during labour. But in convulsions occurring before and after parturition, I have found small doses of belladonna most beneficial in calming the nervous susceptibility so intimately connected with convulsive action.

In every case of convulsions during labour our primary object should be to deliver the patient as speedily as is consistent with her safety

* Manning, "On Female Diseases," p. 357: London, 1775; Romberg, "A Manual of the Nervous Diseases of Man," Sydenham Society, Translation, vol. ii. p. 190: London, 1853. Schwartz, "Ueber Eclampsia der Kreissenden," p. 54: Riga, 1851.

† Fearn, *American Journal of Obstetrics*, May, 1871, p. 28.

‡ Claussier, "Considérations sur les Convulsions qui attaquent les Femmes Enceintes." Paris, 1823.

and that of the child. This rule of practice was long since pointed out by Mauriceau—"La convulsion est un autre accident qui fait souvent périr la mère et l'enfant, si la femme n'est très promptement secourue par l'accouchement qui est le meilleur remède qu'on puisse apporter à l'une et à l'autre."*

The convulsions do not always cease when delivery is effected, or may even commence after it. Still these cases afford no argument against the general principle that, puerperal convulsions being obviously connected with the state of the gravid uterus, the sooner this condition is terminated the sooner will the convulsions cease. The manner of accomplishing this purpose must depend on the stage and character of the labour in each case. But if the symptoms be at all urgent, the former consideration may be in a great measure disregarded, and we should not then hesitate to deliver our patient by either version or the long forceps as soon as the os uteri can be opened sufficiently to enable us to do so. In these cases only, despite Dr. Blundell's excellent aphorism, "meddlesome midwifery," is not necessarily "bad midwifery."

With regard to the manner of effecting this, as a rule the dilatation of the os goes on during the convulsions, and by keeping our patient under chloroform we may generally attend the natural occurrence of the second stage of labour before being obliged to deliver. But in some cases, as I very recently had an instance, the os, after expanding to a certain extent, becomes rigid and undilatable, the convulsions meanwhile recurring with increasing violence. In such cases the perforator and crotchet were formerly freely resorted to. Thus, in no less than eight of Dr. Collins' thirty cases of convulsions, delivery was effected in this way. I cannot regard embryotomic or child-destroying operations as justifiable, even in these cases, for we now have it in our power to effect delivery without resorting to them, by dilating the os uteri with Dr. Barnes's dilators, or, where these fail, by incising the contracted circular fibres of the os with a guarded bistoury, as originally suggested by M. Dubosc of Toulouse, in 1781, so as to allow a living child to be delivered. Such an operation should, however, be only regarded as the *ultima spes*, and confined to those rare cases in which the delivery of a living child from a living mother cannot be effected by less hazardous means.

CASE I.†—(Reported by Dr. F. Butler, then resident in the hospital.) Mary Corby, aged eighteen, first pregnancy; duration of labour seventeen hours, complicated with apoplectic convulsions and plurality of children. First child, head presentation, delivered (dead) with forceps. Second child, footling presentation, lived only two or three minutes.

* "Traité des Maladies des Femmes Grosses." Par François Mauriceau. Septième édition. Tome première, p. 335. Paris, 1740.

† I am indebted for the reports of several of these cases to the notes of gentlemen who were at the time resident in the Rotunda Hospital.

History and Treatment.—At 2 o'clock, P.M., on October 21st, when first seen patient was suffering from a paroxysm of apoplectic convulsions ; cold water and vinegar were applied to the vertex and nape of the neck ; after fifteen minutes' application without any good result, Dr. Madden was sent for, and advised the cold douche, which was tried and continued for thirty minutes, but without relieving the paroxysm ; it, however, reduced the frequency of the pulse from 145 to 80 beats per minute. On examination per vaginam the os was found to be dilated to the size of a shilling.

Dr. Madden administered calomel gr. v, and proposed depletion by bleeding from the arm, but as the paroxysms were almost continuous, he was unable to do so until chloroform was administered, which immediately checked the fit. She was now bled from the right arm and took ℥xij of blood ; previous to the bleeding her pulse had risen to 140, but after it fell to 72 per minute. The patient was then (4.45) removed to the hospital, being still under the influence of chloroform.

When the patient came into hospital the hair was closely cut from the back of her head and vesicating collodion applied.

At 7, Dr. Denham visited her and ordered sinapisms to the calves of her legs and the soles of her feet, and an enema of turpentine, castor-oil, and assafoetida to be administered, which only partially relieved the rectum. At 10.30 the membranes ruptured, the os being about the size of a five-shilling piece, and the head presenting.

At 10.40, the patient's pulse being 154, full and bounding, and her respiration stertorous, Dr. Madden again bled from the arm and took ℥xxxviiij of blood ; a bladder of ice was applied to her head ; the pulse did not diminish in frequency, but became small and compressible, nor was the florid colour of her lips at all altered.

At 11.30 an enema, the same as before, was administered, and hot stupes applied to her feet every fifteen minutes for an hour.

At 12.30 we administered croton oil ℥ij.

At 12.50, on examination, the os was found fully dilated.

At 12.55, Dr. Madden applied his forceps and delivered the first child (dead). The Master now examined and found there was a second child, footling presentation, which was delivered, but only lived for three minutes.

Seven minutes after the birth of the second child both *placentæ* came away. After delivery the patient appeared to be sinking, and sinapisms were applied to the calves of her legs and over her heart, and an enema of beef-tea and brandy administered and repeated every hour until death ensued, at 2.30 P.M. on the 22nd.

Leave having been obtained to examine her head, a post-mortem examination was made at 8 P.M. ; the pia mater was congested, but there were no clots found, nor was there any serous effusion.

Subjoined is a list of the paroxysms :—

The first paroxysm was felt by the patient at 9 A.M. on the 21st, and she had five fits before she was seen at 2 P.M.

Duration of Fit. minutes.	Interval. minutes.	Characters.	Duration of Fit. minutes.	Interval. minutes.	Characters.
2	18	General.	2	2	Confined to head, body, and upper extremities.
2½	18	Do.			General.
2	2	Do.	2	57	Do.
3	23	Do.	2½	18	Do.
2	3	Do.	1	12	Do.
2	5	Do.	2	62	Do.
2	10	Do.	3	20	Do.
3	5	Do.	2	17	Do.
2	25	Do.	2½	30	Do.
2	10	Confined to body, head, and right arm.	2	30	Do.
1½	3	Do.	1½	20	Do.
2	30	Do.	2	15	Do.
4	1	Do.	2	15	Do.
1	5	Do. and left arm.	2½	15	Do.
2	10	Do.	2	15	Do.
1	48	Do.	2	20	Do.
2	20	Confined to head, body, and upper extremities.	1½	20	Do.
3	27	Do.	2	20	Do.
2	22	Do.	3	15	Do.
			2	15	Do.

During each paroxysm chloroform was administered until the fit terminated; at first this treatment was attended with marked success, but afterwards did not prove so efficacious.

CASE II.—Rosanna Mortimer, aged twenty-eight, first pregnancy, was admitted into hospital, October 8th, 1869, being eight months pregnant. She had five attacks of epileptiform convulsions during that day, commencing at 5 P.M. in the afternoon. When admitted she was in a semi-comatose condition; cold affusion was immediately resorted to with sinapisms to the legs and feet, and turpentine and assafoetida enemata. She soon became conscious, had no return of the fits, but still complained of headache and confusion of thought. One grain of extract of belladonna was ordered every fourth hour. On the 10th she was delivered of a healthy living male child, weighing 5 lbs., after a natural labour of nine hours, and made an excellent recovery.

CASE III. (Reported by Mr. Roche, then resident).—M. R., aged twenty-two; first pregnancy; married ten months; labour commenced at 1 P.M. November 15th, and terminated at 1 A.M. on the following morning. The child was a male, and was born alive, and the placenta was expelled immediately. Shortly afterwards she had in rapid succession three attacks of convulsions. At 2 A.M. Mr. Roche saw her, and found her unconscious, and suffering from hemorrhage. On examination a small piece of membrane was found in the os, and being removed, the hemorrhage ceased. At 2.30 A.M., she had a fit of an apoplectic kind, and up to 6 o'clock A.M., when she was removed to the hospital, she had had seven of these seizures, with an average

interval of half an hour between them. During the fits, the eye-balls were turned up, the pupils widely dilated, tongue protruded and bitten, frothing at the mouth, lips blown outwards with the violent expirations, and a peculiar jerking lateral movement of the lower jaw. The head, neck, and upper extremities were the parts principally affected during the fits.

Eight grains of calomel and a drop of croton oil were now administered and followed by a fetid enema. The head was shaved, ice was applied, hot mustard stupes to the calves of the legs and soles of feet, and blister to the nape of the neck.

From 6 A.M. to 2.15 P.M., she had nine fits, with an interval of three-quarters of an hour between them. They then became more frequent, till a quarter past eleven o'clock P.M., during which time—*i.e.*, from 2.15 till 11.15 P.M.—she had eighteen fits. There was then an interval of one hour and twenty-five minutes, followed by a fit, and at 1.15 A.M., November 17th, the last fit occurred. The total number of convulsive seizures was thirty-six.

At 3.50 P.M., November 16th, her pulse being 116, hard, full, and bounding, and the fits recurring very frequently, twenty ounces of blood were taken from the arm; the pulse now rose to 154, but became soft and compressible, and the frequency of the epileptiform seizures diminished. Midnight on the 16th, the following was directed:—

R	Extract of belladonna	gr. ij.
	Chloric ether	℥xl.
	Aromatic spirits of ammonia . . .	℥xl.
	Beef-tea	℥iv.

℥j to be injected every third hour, ice bag to head, and the evaporating lotion. Under this treatment the symptoms of eclampsia rapidly subsided, and on their cessation the following day she was quite insensible, but unable to speak or swallow, the tongue being greatly swollen and very painful, having been severely bitten during the fits.

On the 18th, cerebral symptoms being superinduced by the belladonna, it was discontinued, and general stimulants with appropriate local treatment were directed. She convalesced speedily, and on the 27th was discharged well.

CASE IV.—Julia Kavanagh, aged thirty-eight; second pregnancy; admitted December 6th, 1869, brought in from North Union, where she had had a great number of epileptiform fits during the entire time of labour. Shortly after her admission she was delivered naturally of a living male child, weighing $7\frac{1}{2}$ lbs., having been twenty-six hours in labour. Ten minutes after the expulsion of the placenta she had a violent epileptiform fit, which was checked by cold affusions, sinapisms, and blisters. She was then put on $\frac{1}{2}$ -grain doses of extract of belladonna, had no return of the seizures, and made a good recovery.

CASE V.—Julia Ward, married, aged twenty-five ; first pregnancy. First seen at 11 A.M., April 5th, 1870. At this time she was completely insensible. The friends stated that she was seized with convulsions at 5 A.M., and since that time had had three. She rallied after the first, and conversed rationally, but since the second she had been comatose. A slight contusion was noticed above the right eye, caused by a fall at the access of the first paroxysm. Had passed urine involuntarily. Upon vaginal examination the os uteri readily admitted the end of the finger. She was taken to the hospital, and had a convulsion while in the cab. On admission, comatose ; slight edema of lower extremities ; urine drawn by catheter, and found loaded with albumen. 11'30 A.M.—Ordered

R Calomel. gr. v.	R Spt. terebinth. ℥j.
Pulv. jalap. co. . . . gr. xv.	Tr. assafœtida ℥j.
Ft. bolus.	Gruel Oj.
	Ft. enema.

To be given at once.

Slight operation from enema. Paroxysms continued at intervals of about twenty minutes. The convulsions were general, epileptiform in character, and about one minute in duration.

At 1.50 P.M., ordered repetition of enema, sinapisms to calves of legs, and cold lotion to the head. The enema was not at all retained, a paroxysm coming on while it was being administered. About fifteen minutes after, slight action of bowels. During the afternoon the pulse was 90 during the interval of the convulsions, and 120 immediately after a paroxysm. After 1.30 P.M., there was continuous slight convulsive action during the intervals of the paroxysms. At 5 P.M., the administration of chloroform was commenced, and continued until 8.20 P.M. ; during this time the convulsive action of the muscles ceased, but the paroxysms were unmodified in their character or duration, and occurred at average intervals of twenty-five minutes ; ℥jij ℥j of chloroform were administered. At 9 P.M., the os being about the size of a half-crown, and dilatable, the long forceps were applied, and the patient was delivered of a dead female child (the head was presenting in the third position). The placenta came away in five minutes. The uterus contracted well after delivery, and no hemorrhage followed. Convulsions continued after delivery, at average intervals of about twenty minutes. At 11'35 P.M., Dr. Johnston ordered an enema of one grain of aqueous extract of belladonna, in two ounces of beef-tea, sinapisms repeated. Enema repeated 12.30 A.M., April 6th, sinapism to back of neck at 12'40 A.M., pulse 140. Convulsions still continuing at brief intervals. Enema repeated at 3.30 A.M., and again at 6.30 A.M. ; sank at 10.20 A.M. At no time since first seen had she been conscious.

List of the Paroxysms.

April 5th. Commenced at 5 A.M. Three before 11 A.M.

No.	Time	No.	Time
4	11.30 a.m.	29	12.25 a.m.
5	12.15 p.m.	30	1.0 a.m.
6	1.0 p.m.	31	1.15 a.m.
7	1.45 p.m.	32	1.28 a.m.
8	2.0 p.m.	33	1.55 a.m.
9	2.40 p.m.	34	2.20 a.m.
10	3.10 p.m.	35	2.37 a.m.
11	3.30 p.m.	36	2.55 a.m.
12	4.5 p.m.	37	3.30 a.m.
13	4.25 p.m.	38	3.48 a.m.
14	4.45 p.m.	39	4.15 a.m.
15	6.15 p.m.	40	4.35 a.m.
16	6.40 p.m.	41	5.5 a.m.
17	7.0 p.m.	42	5.20 a.m.
18	7.25 p.m.	43	5.40 a.m.
19	8.0 p.m.	44	6.8 a.m.
20	8.20 p.m.	45	6.25 a.m.
21	8.45 p.m.	46	6.47 a.m.
	Delivered at 9.0 p.m.	47	7.25 a.m.
22	9.40 p.m.	48	7.50 a.m.
23	10.10 p.m.	49	8.20 a.m.
24	10.25 p.m.	50	8.45 a.m.
25	10.50 p.m.	51	9.5 a.m.
26	11.15 p.m.	52	9.20 a.m.
27	11.50 p.m.	53	9.50 a.m.
	April 6th.		
28	12.10 a.m.		

Post-mortem examination at 3.45 P.M., April 6th. Purple discoloration of dura mater, an inch and a half in length, and one inch in width, at a point corresponding to the union of the sagittal sutures with the coronal; surface of brain congested. Clots in posterior portion of superior longitudinal sinus, and colourless fibrin throughout the whole extent of the sinus; about $\frac{3}{4}$ of serum in right ventricle.

Uterus rising to lower margin of umbilicus, and containing several clots. Kidneys apparently normal on section. A small quantity of pus found in the pelvis of each. Local peritonitis in region of left kidney.

CASE VI.—April 18th. B. W., aged thirty, first pregnancy; was delivered of a living female child, after a labour of sixteen hours. A short time after the commencement of labour she was attacked by asthenic convulsions, after which she became unconscious. The fits continued to recur at shortened intervals during the entire time of labour. All the usual remedies—cold affusion, purgatives, counter-irritants, &c.—being, of course, resorted to, though without benefit. The placenta was retained by want of uterine action for two hours, and shortly after its expulsion she sank, and died in a comatose state.

CASE VII.—M. K., aged thirty-five, was delivered of her sixth child, a healthy male, on May 14th, after a natural labour of twenty-four hours. The placenta followed almost immediately, and ten minutes after its expulsion she was attacked by asthenic convulsions, having only one fit, however. This lasted for seven minutes, and was checked by cold affusions and sinapisms to the calves of the legs. After the seizure she remained unconscious for some time, but had no return of the attack, and made a good recovery.

CASE VIII.—Within the last month, through the kindness of Dr. J. Byrne Power, I had an opportunity of seeing a very interesting case of puerperal eclampsia in a patient of his—a lady, aged about thirty-two, who was attacked with asthenic convulsions immediately before labour. It was her third pregnancy, and several years had elapsed since her last confinement. The convulsions commenced about midnight, April 17th, when Dr. Power was sent for, and resorted to all the measures that could be employed to arrest the disease. When I saw her, about 5 A.M., she was completely unconscious, and, despite the judicious treatment which had been employed by Dr. Power, the fits recurred about every twenty minutes with increasing violence. The convulsions were general, but more marked on the right side. The os was still undilated and rigid, but after some time we were able to introduce, first one large-sized Barnes's dilator, and subsequently a second; but, finding it impossible to overcome the rigidity sufficiently to effect delivery, we were ultimately obliged to incise the os sufficiently to allow version to be performed, and were compelled to complete the operation with the forceps, as the os contracted so firmly after the shoulders had passed as to prevent delivery being otherwise accomplished. The child, a male, was stillborn. After the operation the uterus contracted firmly, the placenta was expelled immediately, and there was no hemorrhage. Half an hour subsequently she had another seizure, and at intervals seven other attacks. She never recovered consciousness, and died five hours after.

Dr. H. RINGLAND said there seemed to be a difference of opinion as to what puerperal eclampsia really was. Some maintained it was apoplectiform in character, while others held its similarity to epilepsy, and many regarded it as purely hysterical—a view which he understood Dr. Madden to hold, and with which he entirely disagreed.

The PRESIDENT said that Dr. Madden had not expressed any such opinion.

Dr. MADDEN said Dr. Ringland had misunderstood him.

Dr. RINGLAND proceeded to say that at the Coombe Lying-in Hospital the majority of the staff held to the epileptic theory. The mode of invasion, the spasm of the glosso-pharyngeal apparatus, the tonic and clonic nature of the subsequent convulsions, to say nothing of the state of semi-coma the patient falls into after the attack—all tended to prove the correctness of that opinion. He had never met

with a case of real eclampsia without the presence of albuminuria. The treatment of one of Dr. Madden's cases must, he thought, be considered questionable, or, at any rate, not one to be adopted without very mature deliberation—viz., the incision of the os uteri. To teach that practice would be hazardous, and in all the cases he (Dr. Ringland) had seen—over fifteen in number—they all answered freely to the usual treatment—bleeding, tartar emetic, and opium in some, and chloroform in others. In one case lately, on the advice of his colleague, Dr. Kidd, he used morphia and atropine hypodermically with marked success. He thought that craniotomy need never be resorted to as a means of delivery in puerperal eclampsia.

Dr. ARTHILL said :—Dr. Madden's elaborate paper takes in the causation, preventive treatment, and active treatment, if I may use the expression, of convulsions. Now as to the causation, in certain cases we are not able to trace it ; but this is proved beyond all manner of doubt, that in the immense majority of cases, in at least 90 per cent., albuminous urine and puerperal convulsions are synonymous terms. Dr. Ringland spoke of puerperal convulsions as being epileptic. With this view I entirely disagree. During twenty-five years I never saw a case of epileptic convulsions occurring in a puerperal patient. I never saw convulsions occurring in labour in a person previously subject to epileptic fits ; nor did I ever see a case of puerperal convulsions that could be classed with any propriety as epileptic. I again repeat that albumen in the urine and puerperal convulsions are, as *a rule*, synonymous terms. There is, in addition to that great class, another class which, for lack of a better term, we must call hysterical—that is, the convulsions depend on some untraceable form of reflex irritation, causing convulsions which, producing no pathological condition, renders it impossible for us to trace the cause. These cases are few. As to the previous treatment, where we have well-defined symptoms—the frontal headache, the flushed face, edema of the feet and of the upper extremities—we know that spare diet, exercise, purgatives, and blood-letting will generally avert the threatened attack. These symptoms do not occur in those rare forms of reflex irritation to which I have alluded. We now come to treatment to be practised at the time. Blood-letting is, in a certain class of cases, of great benefit ; but I think blood-letting may be practised injudiciously. There are doubtless a certain number of patients that will bear blood-letting, even to the amount of 40 or 50 ounces, pretty well, but I should be afraid to go to such an extent. But it is evident, from the fact of albumen in the urine being such a constant concomitant in these cases, that the kidney, not the head, should be treated, and therefore more benefit may be derived from cupping over the loins than will follow from venesection in the arm. The cold affusion I have no great faith in. It may produce a certain effect for the time, but it will have no permanent effect in preventing the recurrence of the convulsions. Next to blood-letting and cupping over the loins, I place faith in active purgation. As to chloro-

form, it is most valuable as a preventive ; I have stopped the convulsions for eight hours consecutively, and, although they recurred when it was withdrawn, that long remission was in itself no small benefit. During those eight hours the os had dilated to such an extent as to enable me to effect delivery, and that was a great matter. Blood-letting, purgatives, and chloroform I regard as our sheet anchors. Tartar emetic is uncertain and comparatively slow in its effects. With respect to the practice of cutting the hair, bleeding the neck, and applying ice to the head, it is often useless. The head, in a great majority of cases, is affected only secondarily ; and unless you can remove the real cause of the convulsions—that is, the blood-poisoning dependent on congestion of the kidney—the treatment directed to the head will be altogether useless. Dr. Madden has told us that in some of his cases the kidneys were not diseased ; but you may have albumen in the urine without any disease of the kidneys. The congestion of the kidney may be purely mechanical, depending on pressure on the renal veins, and you may have a healthy kidney, and yet find albumen in the urine. Our great object is to effect delivery ; but I should hesitate to divide an undilated os to enable me to introduce my hand into the uterus. The incision would, in all probability, be so increased by the subsequent dilatation which would occur during the extraction of the child as to cause a rent that might endanger life. It does not follow that because one case is successful, the practice is therefore sound or free from danger. Dr. Madden has said that in many cases the head is low in the pelvis, while the os is undilated, and therefore that the division of labour into a first and second stage was not in such case correct. It does not follow, however, that because the head is low, we can with safety effect delivery. Dr. Denman long ago laid down the axiom that a tedious first stage of labour was not dangerous—an axiom that every practitioner here will fully endorse—that is, of course, excepting such cases as hemorrhage and convulsions ; but to reverse the rule, and say you may hasten the first stage by any forcible means you may decide on, if only the head is in the true pelvis, seems to me not only illogical but dangerous, and I would therefore protest against the incision of an undilated os and forcible extraction of the child.

The PRESIDENT.—I was very much struck with Dr. Madden's paper. Without going into his reasoning, his practice appears to me to be very sound, with the exception of his using the knife so freely. He seems not to have lost sight of the old landmarks in dealing with these cases. It is a remarkable fact that every one who has spoken this evening has dwelt on the importance of depletion. It is very satisfactory to find that, in investigating the disease referred to, and in tracing its connexion with albumen in the urine and blood-poisoning, we do not lose sight of the practice on which the lives of our patients depend as confirmed by experience. For many years every one thought puerperal convulsions arose from determination of

blood to the head, and considered that depletion was the only means of preventing immediate death ; and I believe whether there be blood-poisoning or not, whether, as we see in jaundice, the bile is carried back into the blood-vessels and circulated in the brain, or whether, as we see in some forms of the disease, the same poisoning is caused by want of action in the kidneys, still there is in a large majority of cases a state of congestion of the brain by serum, or blood or bile, and I believe the only way of preventing immediate fatality in those cases is by depletion. In the last case of convulsions I was called to see, the patient had lain for several hours with eclampsia, fit occurring after fit. The woman was apoplectic ; in the intervals the lancet was used, and the patient recovered her consciousness, although she had been eight or nine hours unconscious. Time was then given for treatment, and the woman delivered of a living child, without any return of the fits. I cannot look back on any one case of convulsions where I used depletion that I had reason to regret it. I think, therefore, Dr. Madden's insisting on this point is of vital importance, and shows that we have not lost sight of our reliable practice on investigating the true nature of the disease. Now as to chloroform, there seems to be some discrepancy of opinion on the subject. I look on chloroform as unreliable as a curative means of convulsions ; but I agree with my friend, Dr. Atthill, who thinks it a valuable means of allaying irritability and lessening the fits until your treatment gets time to tell ; and his suggestion for dealing with the kidney is a very sound one pending the progress of the disease. Chloroform is useful to allay irritation, unless, perhaps, when the convulsions depend upon reflex irritation without organic or functional disease, but not curative. As to Dr. Madden throwing over the different stages of labour, I think he must have been converted by Dr. Power's book, published about 1820, in which he expressed the opinion that pain in labour was entirely unnecessary, and a phenomenon to be entirely avoided and prevented—maintaining that the uterus should expel its contents without any necessity for undergoing the different stages of labour, but simply as the rectum or the bladder would throw off its contents. His book was a very clever one ; but, as chloroform had not then been used in labour, I doubt whether he made many converts to what would then have been esteemed the anti-Scriptural view of "labour being without pain." I am afraid Dr. Madden cannot do away with the stages of labour. Although not an advocate for the free use of the knife, I do not deny that it may be occasionally necessary, but we should be very cautious before we have recourse to it. Formerly the rule was that no one should deliver a woman in convulsions unless he was imperatively obliged to do so, and the impression then was that the irritation produced by forced labour of any kind was such that the likelihood of a fatal termination was increased by it, but especially by turning. In my mind that doctrine was carried to an unjustifiable extent. I therefore

took a line of my own, and did deliver convulsive patients contrary to the rule. The apprehensions of the earlier practitioners on the dangers attending forced deliveries in eclampsia should not, however, be disregarded. In proof of this I could lay my hand upon men grown to manhood who were brought into the world when the mother was in a state of convulsion, and when the mothers did not survive the operation. I merely mention this to suggest caution in dealing with these cases. It seems to me that if you cannot prevent or lessen the frequency of the fits, or relieve congestion of the brain by treatment, depletion, tartar emetic, or chloroform, then you are justified in having recourse to forcible extraction; but from my own experience I do not think you are justified in having recourse to it under other circumstances. There is one other point as to aspersion which I wish to remark upon. It was made light of, but I think it is useful in postponing or lessening the frequency of the fits. We are, then, justified in bleeding, in employing counter-irritation over the kidneys, in using chloroform (and I have seen magical effects from chloroform), and in aspersion; and the combination of these is the sound practice to adopt without reference to the rationale of the disease at all.

Dr. H. KENNEDY said that many years ago he was employed to make a post-mortem of a female who died of this disease. She had been largely bled, and on making an examination of the brain he found one side of it ploughed up by apoplexy.

Dr. ATTHILL hoped it was not supposed that he denied the fact of apoplexy in these cases. He believed the effusion of the serum was a consequence of the fits, not the cause of them.

The PRESIDENT observed that in death from convulsions they invariably found evidence of effusion.

Dr. MADDEN briefly replied. The observations made by Dr. Ringland about epileptic convulsions had been sufficiently answered by Dr. Atthill. Dr. Atthill said that albumen in the urine and convulsions were synonymous terms. Now he (Dr. Madden) had seen sixteen cases altogether, and out of these a small proportion—certainly not more than one-half—had albuminous urine; and, on the other hand, women with albuminous symptoms frequently escaped convulsions. Dr. Atthill regarded the application of the knife as a hazardous remedy. He agreed with him that it was a desperate remedy, but he ventured to remind him that the disease was a desperate one, and that if the woman were not delivered she would die. The only cases in which he used the knife were where all other means of effecting the delivery had been fairly tried and had failed—that is, the delivery of a living child from a living mother. With regard to cupping over the loins, it sounded very well, but it would be found no easy matter to cup a woman in puerperal convulsions; besides which the practitioner did not generally carry a cupping apparatus in his obstetric bag. It must be remembered that although the starting-point of the disease might be in the kidney, as Dr. Atthill contended, yet, when con-

vulsions set in, it was the spinal centres that were affected, and cupping over the loins would have but little effect then. If, indeed, the cupping were effected before the convulsions began, it might cut short the disease. The President had expressed his views on depletion. The cases he had seen recover were invariably cases in which blood-letting had been resorted to. Tartar emetic was useful, if there were time, but if the convulsions were increasing in frequency, and the life of the patient in danger, then he would resort to the knife; but, as already stated, he had never resorted to that method until tartar emetic and all other means had been tried and had failed. He did not mean to do away with the necessity of dividing labour into stages as a safe landmark for students; but where they were sailing, as it were, between Scylla and Charybdis, they had not time to pay attention to these theoretical divisions.

The PRESIDENT had omitted to mention one point which he thought most essential, and that was the almost invariable presence of headache in the last months of pregnancy in cases of puerperal convulsions. Whenever, then, an obstetric practitioner met with a case in an advanced stage of pregnancy in which the patient complained of headache, let him examine the urine, and look forward to the probability of convulsions, and at once treat the kidneys; deplete locally, and, if necessary, generally; administer saline aperients and alteratives, &c., and thus prevent this alarming disease.

Case of Tetanus following Abortion.

By M. A. BOYD, L.R.C.S.I., &c.

The case which I beg to lay before you to-night is one of tetanus following abortion at the third month, and, from its rarity, I deem it of sufficient importance to bring under your notice.

On the third of last month I was sent for to see a thin, anemic woman, suffering from abortion in her first pregnancy, produced by a fall in reaching to a clothes line. On examining her I found the ovum protruding from the os; hemorrhage, which had been pretty free during the night and morning previous, having almost entirely ceased. I made an attempt to remove the ovum with my finger, but failed in doing so, a part only coming away. As the hemorrhage again returned during my endeavours to remove it, I plugged the vagina before leaving, and ordered ergot, with gallic acid and opium, to be given every third hour.

On the following morning I removed the plugging, and, as the hemorrhage had almost entirely ceased, did not reintroduce it, but continued the ergot and gallic acid. Next day I was informed, on visiting her, that the remains of the ovum had entirely come away, attended with some hemorrhage; but the fragments I found were so mixed up with blood-clots, and so adherent to articles of clothing, that I did not feel satisfied as to the whole of it being expelled. On

examining, however, I found the uterus collapsed, and no evidence on digital pressure that its cavity contained any of its remains.

She continued to progress favourably, with no recurrence of hemorrhage, till I saw her next day. As some pain and tenderness were then complained of over the uterus, I ordered a linseed poultice to the abdomen, with 20 grains of the hydrate of chloral at night.

As she continued to do well the two succeeding days, taking nourishment, and suffering no pain or weakness, I did not consider it necessary to see her.

On the morning of the 9th, the sixth day from the time I first saw her, I was sent for early to visit her. On arriving I found that she had spent a restless night, and had several fainting fits; her pulse was feeble and quick; her deglutition difficult and painful, with a sense of choking, and stringy mucus, which she could with difficulty get away, filling up the back of the pharynx; the masseter muscles were rigid, and the teeth could, with difficulty, be separated to a distance that would admit the index finger. I found these symptoms set in five hours previously, after awaking from a short sleep. The peculiar expression of face, aptly termed the risus sardonicus, was also well marked, but at this time there was no opisthotonos, or rigidity of neck, or of any muscles, except those of the face and pharynx.

I immediately admitted the patient to hospital, and ordered 25 grains of hydrate of chloral to be given every four hours; and taking into account her weak pulse, and the recent loss of blood, ordered beef-tea and wine to be given freely every third hour.

On visiting next morning, the 10th, I found she did not enjoy more than ten or fifteen minutes' sleep, at intervals, during the night. Opisthotonos had also set in, the spasms of which, on making the slightest movements, were most painful and intense, and generally coming on after dozing for a few minutes. The muscles of the lumbar region and extremities were, however, from beginning to end entirely unaffected. Her pulse was also up to 138 in the minute, but stronger than on the previous day. I increased the dose of chloral to 30 grains every fourth hour, but its administration caused such a feeling of burning in the throat, though largely diluted, and induced such paroxysms of painful spasm, that I had to change my hand, and order its administration per rectum—35 grains being given in this way, at the same interval, in some warm beef-tea.

I again made a digital examination per vaginam to ascertain lest by any chance a portion of the secundines might still be remaining in the uterus, and causing the irritation which led to the trismus, but I found the uterus was fast regaining its natural size, the os almost closed and the cervix elongated, and a slight leucorrhœal discharge coming away; the sero-sanguineous one following the expulsion of the ovum having, I should mention, ceased prior to the supervention of the trismus symptoms.

On the morning of the 12th I found she had spent the last night much easier than the previous one, continuing in a state of stupor

from time to time from the effects of the chloral, and during which the muscles of the face and neck were considerably relaxed, but spasm generally returned to some extent when she was roused to take nourishment, and her pulse had risen to 140 in the minute, but respiration continued, as it had from the beginning, quite normal.

I again made a vaginal examination to satisfy myself as to the condition of the os and uterus, and not being perfectly assured, from the previous imperfect examinations, but some portion of the ovum might still be remaining, decided on dilating the os to explore the uterine cavity. I accordingly introduced four pieces of sea-tangle, varying in size from that of a No. 6 catheter to a No. 12—having, previous to the operation, placed the patient under the influence of chloroform. The dose of chloral administered per rectum was now also increased to a drachm every fourth hour. As little or no nourishment could be taken, nutrient enemata were almost entirely substituted, and the occasional inhalation of chloroform when the spasms were severe. During the night two attacks of general convulsions set in, lasting about a minute; there was no recurrence during the latter part of the night, and several hours' tranquil sleep supervened.

On the morning of the 13th I removed the sea-tangle tents, and I was enabled to introduce two fingers and thoroughly explore the cavity of the uterus and satisfy myself that no portion of the ovum whatsoever remained. The pulse had now risen to 150 in the minute, and respiration was quick and laboured. Towards evening the patient seemed worse, and lividity of the lips, with increased quickness of respiration, showed itself—a sure evidence of congestion of internal organs, while increasing stupor and complete relaxation of all spasm indicated the last act of the painful drama. She continued in this state during the night, occasionally waking up to consciousness when the enemata were being given, which now consisted of brandy and ammonia, but towards morning became more and more prostrate, and died apparently from the combined effects of exhaustion and congestion of the lungs on the sixth day from the commencement of the tetanic symptoms.

The retention of a foreign body in the uterus, such as a detached ovum, or fragments of it, which is assigned by most writers as the principal cause of tetanus following abortion, could not be looked on as the true source in this case, as the dilatation of the os and exploration of the uterine cavity set that idea completely aside. I am inclined to attribute it to the irritation which the brain must have suffered from deprivation of blood in an already anemic subject, for we know how prone such subjects are to convulsions, an allied spasmodic nervous affection after even very trifling hemorrhage, and it is difficult to say where the line of demarcation can be drawn between the irritation that gives rise to the clonic spasms of convulsions in one case and the tonic ones of tetanus in another.

As to the cause of death in this disease, pain from spasm of the muscles, which is assigned as one of the principal ones, could not be

said to be so in this case, as from the time she was completely under the influence of the chloral, when large doses of it were given, upwards of a drachm every fourth hour, or about one ounce in the twenty-four, she never complained of pain, and the stupor which it induced was accompanied by considerable relaxation of the muscles of the neck and jaws; it was not the comatose stupor that large doses of opium produce, and from which a patient can with difficulty be roused, but a state of perfect deep sleep from which the patient was easily roused, and which rather resembled the heavy sleep of a person intoxicated than one of coma.

Here I may advert to the large quantity administered—nearly an ounce in the twenty-four hours; the first doses given—namely, 20 grs. every fourth hour—produced neither sleep nor freedom from pain till the dose was increased up to 35 and 40 grs. in the same interval. Whether or not the system was more tolerant of the drug, owing to the condition of pain and spasm, just as patients are more tolerant of large doses of opium under the same circumstances, I am not prepared to say, but I was principally induced to try it as a remedy in this disease from its action as a paralysing agent on the vaso-motor nerves, more particularly those of the head and face, as shown by Dr. Ludwig Kirn in a paper translated from the German, and appearing in the June number of *The Practitioner* for last year. I believe remedies, to be of any service in this disease, must act through the agency of these nerves alone, and our best authorities agree in looking on the vagus and sympathetic from reflected irritation conveyed to them through the medulla oblongata as the locale of the disease, and a remedy like hydrate of chloral, which acts directly on them, the most suitable drug to be administered.

It appeared to me, also, that an agent of this kind is the only one from which we are to expect any good results in treatment, and not from any of the host of antispasmodic remedies, so-called, which merely act by relaxing the muscles alone, not through the agency of the nerves, but as depressants of the general system—results which we could as easily obtain by any emetic or a prolonged warm bath.

Dr. MACSWINEY said that it had been observed during the previous discussion that desperate cases required desperate remedies. The occurrence of tetanus under the circumstances mentioned by Dr. Boyd was of such a desperate character that almost any remedy that could be tolerated would be justifiable in its treatment. He thought, were it not for this explanation, the enormous doses of chloral hydrate given in this case could not be justified. He believed the doses given by Dr. Boyd were the largest on record that had been given, either by the mouth or the rectum. He did not imply any censure on the treatment, for he was certain the desperate character of the disease would be held to justify a recourse to any means, however heroic, that would hold out any faint hope of being serviceable.

Dr. ATTHILL said that he had never seen a case of puerperal tetanus. He agreed that Dr. Boyd's case was a valuable one, and

clearly detailed.. Several such cases had been recorded lately in the medical journals, and there was one suggestion which attracted his attention, and which he was determined to put in practice if he should ever meet with a case of the kind, and that was transfusion—either transfusion of blood alone, or transfusion of blood with a combination of such medical agents as might be considered desirable. He did not object to the treatment adopted by Dr. Boyd. As yet they knew of no remedy that would arrest the progress of tetanus.

Dr. MADDEN should not like this discussion to forth without a word of protest against the giving of such enormous doses of so heroic a remedy as hydrate of chloral. The treatment was, no doubt, justifiable in the particular case brought before them. He (Dr. Madden) was one of the first who read a paper in that Society on hydrate of chloral, and he then mentioned an extraordinary case in which he gave 30 grains by the rectum until 90 grains had been administered in the day, and he thought himself exceedingly fortunate that his patient survived; but he certainly never heard or read of a case in which doses amounting in the aggregate to an ounce of a drug so powerful, were administered to a patient before in the same space of time.

Dr. BOYD.—As to taking a large quantity of chloral, I may state that I have a patient at present for whom I ordered a two-ounce bottle of syrup of chloral, a teaspoonful to be given every two hours till sleep had been procured, the whole of which she ultimately took; and she was then in the habit of sending out for another two-ounce bottle, and took the two, amounting to $\frac{3}{4}$ of an ounce of chloral, and this she had been in the habit of doing for three weeks or a month.

Dr. DARBY (who, in the absence of Dr. Kennedy, now occupied the chair) said he knew a first-rate practitioner in this city who, when the drug first came out, gave 90 grains in one dose. The facts of that case, he believed, had been published. He himself on one occasion, in puerperal mania, when it was impossible to procure sleep by any other means, gave 60 grains in one dose. He was under the impression that they might venture to give a larger dose by the rectum than by the mouth. He knew of cases in which persons of their own mere notion took syrup of chloral to a large extent, but perhaps not to so large an amount as was given by Dr. Boyd. At the same time he advised them to be very cautious in administering chloral. He generally gave 8 or 10 grain doses; and even with these doses, when repeated two or three times in succession, the individuals frequently complained of burning fauces and other unpleasant symptoms.

Obstetric Summary.

DR. SNOW BECK'S CASES.

At Dr. SNOW BECK's request we publish the following letter, addressed to the editor of the *British Medical Journal*:—

SIR,—Were I permitted to express an opinion, I would say, that Dr. Barnes exercises a wise discretion in resolutely refusing to enter into any scientific discussion. But, as the reasons he adduces in the present instance for this decision involve certain charges against myself, I can scarcely be expected to endorse them. These charges appear to consist of—1. That I have made some mistake in my arithmetic; 2. That I have committed the heinous offence of not giving him all he has asked for.

1. I am not aware of any mistake in my arithmetic; and certainly I cannot accept that which Dr. Barnes wishes to force upon me. In this position, it may be well to go over the subject, and show how the numbers were made up. When I was unexpectedly asked by Dr. Playfair, during the discussion, how many cases of death, following the injection of the perchloride of iron, I had seen, I answered, off-handed, "Some nine or ten." Afterwards, I found this was substantially correct, and did not feel it necessary to alter the figures. Subsequently, I stated I had had an opportunity of examining the uterus and appendages in four of these cases, and in all the appearances were identically the same. In strict language, perhaps, I was wrong in saying I "had seen" these cases; for, in two of them, I did not see the women during life, and only had the opportunity of carefully examining the uterus and appendages after death. But, as this examination enabled me to speak with confidence as to the cause of death, I cannot think I committed any serious fault in speaking of them as I did. These four cases have been fully recorded, with all their faults, in this journal; and, in a postscript added to them, I said: "I find that eleven cases of death, and 'one unsuccessfully,' after the injection of the perchloride, were mentioned by different Fellows of the Society at the partial discussion which was permitted. These cases, with the four now recorded, make a total of fifteen or sixteen cases of death, besides others which are known to have occurred." Exception, however, is taken to these eleven cases, which are made up as follows: 1, Dr. Routh; 2, Dr. Graily Hewitt; 3, 4, 5, Dr. Murray; 6, 7, Dr. Phillips; 8, Dr. Bantock; 9, 10, 11, Dr. Protheroe Smith; "one unsuccessfully," Dr. Playfair. I have again referred to the *Obstetric Transactions*, vol. xv., and it still appears to me that this account is perfectly correct. And, as these eleven or twelve cases do not include either of the four previously recorded, the total number is fifteen or sixteen. Dr. Playfair's "one unsuccessfully" case is thus left doubtful whether it arose from the effects of the hemorrhage, or followed the injection of the perchloride; for,

when a case is reported in this ambiguous way, there is doubtless some special reason for the ambiguity.

Dr. Barnes, however, endeavours to make out that I have counted the same case "twice over," and that I have "thrice been guilty of counting one case as two." This, however, is not the fact; each of these cases is a separate and distinct case. Dr. Barnes also affirms that one of the cases referred to by Dr. Protheroe Smith is the same as that described by Dr. Hewitt. Again, this is not the fact; for these are two distinct cases, according to the more detailed notes I possess of both. And, considering the facilities Dr. Barnes has for obtaining correct information, there is no excuse for his making these statements, which are contrary to the facts. The case recorded in the *OBSTETRICAL JOURNAL* for February, and the case briefly referred to by one of the speakers, may, or may not, be "one and the same." But, in the doubt, I have counted these accounts as one case only. The case related is, no doubt, very characteristic; and, being one which so aptly illustrated the result in practice of the erroneous dogmas at present taught in the schools, I could not pass it over. Sufficient details are given to enable any one acquainted with the facts to recognise the case; but all names were omitted, for the simple reason that it was not intended to be personal. I took great pains to ascertain the facts correctly, and firmly believe they are accurately reported. The facts were confirmed by one of the medical gentlemen in daily attendance, who also told me that, if I had not given the particulars, it was his intention to have published them. And, were I now to add any further account, Dr. Barnes, who writes as if he were aware of all the circumstances, must know that it would lay me open to the attentions of those legal gentlemen who have wistfully considered the subject, but whose favours I am not desirous to facilitate: whilst the designation, "a professor of midwifery in one of the largest medical schools," would as correctly apply to Dr. Barnes himself as to any other individual.

2. The further cases Dr. Barnes seems so earnestly to seek will be furnished in due time; but, as I am unable to see of what use they can be in a scientific point of view, I have not been in any haste to record them. In none of these remaining cases had I an opportunity of examining the body after death, and of some I have no written record. Dr. Barnes remarks: "In due time and place, he will recognise the duty of recording his own experience;" and I am unable to understand why I should not follow so excellent an example. Instead of being irritated by such phrases as "worthless or non-existent cases," or the various carefully concocted sentences which are intended to be so severe, I can only regard these as the outpourings of a disappointed and embittered spirit, who has discovered that mere visionary assertions, without any foundations in facts, cannot stand the test of ordinary scrutiny. Having vainly endeavoured "to manipulate the facts," and after beating the air in the fruitless search of what never existed, Dr. Barnes reaches the cul-

minating point: "Here, then, I dismiss Dr. Snow Beck." A severe sentence, no doubt, yet one I still hope to survive. But Dr. Barnes must not imagine that such an assumption of the "schoolmaster" will cause me to forego the consideration of his various fireside fictions, such as—the physiological hypertrophy of the spinal cord developed with each pregnancy; the assertion that the action of the uterus during labour is a series of convulsions; that this action depends upon the effect of some imaginary nerve-force emanating from the spinal cord; the Higginson's syringe action of the gravid uterus during post-partum hemorrhage, pumping blood out of the body which it sucks up from the aorta and vena cava; the chemical action and crinkling effect on the inner surface of the gravid uterus from the injection of the perchloride of iron; *cum multis aliis*. I can assure him I have not any intention of forgetting these wonders of medical literature. On the contrary, I trust to continue to work at the subjects involved in this discussion with as much care as I am capable of, in the hope that I may contribute somewhat to our knowledge respecting them, and, in some degree, be instrumental in diminishing, for I cannot anticipate we will ever be enabled entirely to prevent, those fatal terminations which too frequently occur from post-partum hemorrhage, or from those deadly affections after parturition so long known under the term of puerperal fever. And this I must continue to do, notwithstanding the *ad misericordiam* appeal to the "company of martyrs" which Dr. Barnes so pathetically parades.

I am, &c.,

T. SNOW BECK.

Portland Place, May, 1874.

[We must reiterate our opinion, that it is due to the profession, and only just to himself, that Dr. Snow Beck should publish the remainder of his cases. It is not a valid plea for delay that he is "unable to see of what use they can be in a scientific point of view." He has used them in forming and substantiating his convictions, and must therefore have considered them important.—ED. O. J.]

On Herpes Gestationis.

Dr. Duncan Bulkley, of New York, in a paper lately read before the New York Academy of Medicine, gives the clinical history of a patient under his care, who was attacked by this affection in her two pregnancies. After giving a brief account of eight other cases observed in the last twenty years, he sums up as follows:—

1. There is an affection of the skin directly dependent upon the gravid state of the uterus, which may make its appearance at any period of gestation up to the seventh month, and generally continues until the organ is emptied of its contents and has in a measure resumed its former state; this eruption is very apt to recur at each successive conception.

2. The cutaneous manifestations are chiefly an intense irritation, consisting of burning, itching, or stinging, and sometimes pain, with the development of erythema, papules, vesicles and *bullæ*, up to the size of a hen's egg; the majority of the blebs, however, seldom surpass in size a large bulla of herpes. These vesicles are commonly in groups, but do not follow any definite nerve track, appearing first generally on the extremities, and afterwards involving the larger part of the body. Exhaustion may ensue from the cutaneous irritation, but the disease is non-febrile.

3. The eruptive disease does not terminate at once after delivery, but slowly retrogrades by the development of fewer and fewer vesicles at increased intervals, until the disposition thereto ceases entirely. An outburst of greater or less severity is most likely to happen on the third day; it is rare for any manifestation of the disease to remain a month after parturition.

4. This affection is sometimes accompanied or followed by other neurotic manifestations, as erythema, urticaria, and neuralgia, which may continue in the interval of conception, while in many instances the patient experiences perfect health in the interim.

5. This eruption has occasionally been the first indication that impregnation has taken place.

6. The majority of the cases have been uninfluenced by treatment, relief occurring only on the emptying of the uterus.

7. The children are not as a rule affected by the eruption in the mother, although in one case it was accompanied in two instances by a still birth; here, however, the first eruption was followed by the delivery of a living child, whereas the second conception gave a still-born child without any maternal eruption.

Gynecic Summary.

Exudations around the Female Genital Canal.

In a lecture on this subject, Professor Otto Spiegelberg* says he has been much struck lately by the numerous cases of thickening, tumours, and shrinkings in the tissues around the female genital canal. Such cases form a great part of gynecological practice. Our knowledge of these exudations is of recent date: we owe the first clear view of their importance to French authors, especially Marchal De Calvi, Nonat, Bernutz and Goupil. Since their importance has been recognised, two opposite opinions have been maintained as to their etiology; the one makes an inflammation of the serous membrane covering the genital organs, the cause, and pelvi-peritonitis is the ruling affection; the other makes the connective tissue by which the

* "Allgemeines über Exsudate in der Umgebung des weiblichen Genital-canales."

genital canal is surrounded, and which forms the parenchyma of the broad ligaments, the seat, and phlegmon of the pelvis is the most frequent cause of the exudative swellings and tumours. It is difficult to say whether peri- or parametritis is the most frequent, and in individual cases it may be very difficult to distinguish between them. These two affections will still for a long time afford a wide field, both for clinical and anatomical inquiry, as there is still much to be learned concerning their situation, their importance, and their diagnosis. Our ignorance on these points, Spiegelberg thinks, is owing in a great part to indistinct anatomical ideas and deficient knowledge of the relations of the serous layer to the genital apparatus and the pelvic connective tissue on the one hand, and of the relation of the latter to the uterus and vagina on the other. He gives two drawings showing the relation and the way in which the peritoneum is attached to the uterus. He draws attention particularly to this, that the peritoneum is closely attached to the fundus in front and behind the uterus, as low as the so-called isthmus, which is a little above the anatomical internal os, and that there a quantity of loose connective tissue, free from fat and containing a more or less rich plexus of vessels, intervenes between the muscular coat of the uterus and the peritoneum as it passes to the bladder in front and to the rectum behind. The quantity of connective tissue is considerably greater behind the cervix than in the front of it. On the sides the peritoneum is closely attached to the uterus to about the middle, and then passes off, covering the broad ligaments to the walls of the pelvis. Beneath this serous membrane and between it and the levator ani muscle and its fascia (the pelvic diaphragm) there is a thick layer of connective tissue, the parenchyma of the broad ligaments, so that two cavities are formed on the side of the uterus—the upper one, a part of the general peritoneal cavity, forming the pelvic peritoneal cavity, and a lower between the peritoneum and the diaphragm of the pelvis, the subperitoneal cavity, in which is contained the so-called pelvic connective tissue. Beneath this is what Luschke calls the subcutaneous pelvic cavity, and in it is the lower part of the rectum. The subperitoneal is the most important pathologically of these three cavities, for it contains large bloodvessels, venous plexuses, lymphatic glands and nerves; the layer of tissue is very loose around the uterus and has a rich plexus of veins and lymphatics going to the uterus, and is connected with the subserous tissue in front of and behind the uterus. Thus the cervix uteri is surrounded by a layer of loose connective tissue free from fat. This is of special importance to us because (1) it is in intimate connexion with the parenchyma of the cervix forming its capsule; (2) besides containing in it the bloodvessels and lymphatics going to and coming from the uterus, it forms a cavernous tissue (Rouget); (3) it easily takes part in all irritative conditions and swellings of the cervix, and injuries or other lesions to it may set up inflammation in the tissue; its structure affords an especially favourable seat for the absorption and spread of septic matter to the blood and lymphatic vessels.

Virchow gave the name parametritis to the inflammation of this tissue occurring in puerperal cases. Latterly the word has been extended to the inflammation of the parenchyma of the broad ligaments and even of the whole pelvic fascia (Duncan, "On Perimetritis and Parametritis"), and this has brought in some confusion in the right understanding of the inflammation in question. Spiegelberg would call the layer of tissue, about two inches broad, which surrounds the lower section of the uterus and the base of the vagina, the "parametran tissue" (parametrane Gewebe); and so would name the inflammatory infiltration and eventually the induration of it, parametritis, or to prevent misunderstanding, "parametran inflammation" (parametrane Entzündung). The inflammation of the great mass of the pelvic connective tissue which makes up the broad ligaments and which reaches from them to the rectum and sacrum and the anterior abdominal wall, he would call, following the French authors, phlegmon of the broad ligament, or of the pelvic connective tissue respectively.

From what has been said above it is evident that an effusion into the pelvic peritoneal cavity (intra-peritoneal) is exceedingly rarely met with in front of the uterus, and never on the side, but is almost regularly retro-uterine or retro-vaginal. All peritoneal effusions are at first fluid and so flow to the lowest part—that is, into Douglas's pouch, in all the ordinary positions of the body. But the exudation only appears as a tumour when it has become encapsuled, through the adhesion of the coils of the intestine over it to one another and to the pelvic and abdominal peritoneum. This usually takes place in a few days, but may occur earlier, and not a few of the cases diagnosed as retro-uterine hemocele, are such inter-peritoneal retro-uterine exudations. The contour of such a tumour is smooth and uniform. The tumour is lowest in the middle line, at times below the level of the external os; and in women who have borne children, Douglas's pouch often reaches even much lower. It never reaches on the sides the walls of the true pelvis, and is always nearer to these above than below, having an ovoid shape. The uterus is always pushed forwards; whether directly so or at the same time upwards, depends upon its previous relations and the depth of Douglas's pouch.

An intra-peritoneal exudation in front of or at the sides of the uterus, can only occur when the effusion is into a cavity already formed in front of or at the sides of the uterus by adhesion of the surrounding parts.

Parametran inflammations are met with as tumours from the first, for they are limited on all sides by tissue. Their consistence varies with their age; at first doughy or even fluctuating, later firm, hard, knobby, cordlike. They are met with on all sides of the cervix; least often in front, and then of small size, and that because the "parametran" layer is very sparse between the bladder and uterus. They seldom project into the vagina, for as the connexion between the uterus and bladder is very close, the resistance is greater than it is above, where

the tissue is loose, and they push up the peritoneum and can be felt as ante-uterine tumours through the abdominal walls. Retro-cervical parametritis is common, and is often mistaken for an intra-peritoneal effusion, with which it is often associated. It is distinguished by its outline not being defined, by its gradual passing into the parenchyma of the broad ligament, by its marked retro-vaginal position, and by the position of the cervix which is pushed forwards and upwards. But the most common seat for parametran tumours is at the side of the cervix, where the connective tissue is the thickest, and affords the least resistance to the inflammatory collection. They are closely attached to the cervix, surrounding it in front and behind, and appear to come directly from it; they extend out into the broad ligament, and the phlegmon of the latter is an extension from the parametran inflammation. A phlegmon of the broad ligament may, however, be primary. Such tumours have a varying size and situation: at times they occupy the whole subperitoneal cavity, at times near the cervix, at times near the pelvic wall; or they lie in the posterior or anterior part of the cavity. They push downwards and shorten that side of the vagina, and can only be felt through the abdominal walls if of great extent. They are seldom well defined, the outline is mostly irregular and uneven, gradually passing into the healthy tissue; they extend to the pelvic walls, with which they appear to be united for a varying extent. If the effusion is small and there is no parametritis, the uterus may be unaffected; at other times the uterus is pushed to the side opposite to that where the effusion is, or after the effusion has been absorbed, it is drawn over and fixed on the same side. If the tumour is in the anterior part of the subperitoneal cavity, it is felt in and over the inguinal region, hard like a board, with thick upper border closely attached to the abdominal wall. If the tumour is in the posterior part of the cavity, it is felt behind the cervix, firmly fixed to the sacrum, and encroaching or pushing aside the rectum.

With regard to the course of these inflammations, we know that intra-peritoneal effusions, if moderate, and not depending upon infection, are easily absorbed, and thickening, &c. of the serous membrane remains: if encapsuled it escapes into neighbouring cavities. In the phlegmonous condition suppuration is not rare. The pus may become thick, or it may make its way into neighbouring cavities (most frequently the rectum or the vagina, very rarely into the peritoneal cavity). The most frequent result of parametritis and phlegmon of the pelvic fascia is thickening and wrinkling of the connective tissue, the formation of knots or cicatrices.

Parametritis arises from diseased states of the lower part of the internal genital organs, whether following labour or the result of injuries, as from violent jerks to the body, excessive coitus, cauterization of the cervix, dilatation with laminaria or sponge tents, incision or amputation of the cervix, &c., or arising from cold or disease at the cervix.

Phlegmon of the broad ligament is rather due to extension of a parametritis, or it starts in the tissue around the ovary.

Pelvi-peritonitis accompanies affections of the body of the uterus and the Fallopian tubes, especially those of the internal layer. The latter are much rarer than the former, more frequently of a secondary nature: their course is never so lingering as that of an inflammation of the connective tissue.

Glandular Filaments met with in the Ovary of an Adult Woman.

By KRONID SLAVJANSKY.

The following communication was made to the Anatomical Society of Paris in December, 1873 :—

“ In the history of the development of mammalian ovaries a period exists during which the parenchyma of the organ presents formations which have the aspect of strings or glandular filaments. These filaments were observed for the first time by Valentin in 1830, and afterwards were described more exactly by Pflüger. The primordial follicles form at the expense of the glandular filaments in such a manner that the ovaries lose their filamentous structure and acquire the character of a follicular gland. This modification of the structure of ovaries was first observed in animals and afterwards was found in the ovaries of women.

“ The works of Spiegelberg, Waldeyer, and others, have shown that the glandular filaments are, in children, composed of cylinders filled with cells. These cylinders are of an irregular form, and ramify and anastomose. The epithelial elements which compose these filaments communicate with those of the surface of the ovary. These epithelial cells have for the most part a rounded form; those which are placed at the peripheric parts of the filaments present the aspect of short cylindrical cells.

“ Among the cells which form these filaments are generally observed some which are larger and which present the characters of primordial ovules, exactly resembling those which are met with among the epithelial cells of the surface of the ovary (Letzerich, Plihal, Waldeyer, the author, &c.). Spiegelberg and Langhaus in their cases were not able to prove the presence of ovules in the glandular filaments. This negative result, on the one hand, proves the imperfection of their method of investigation, and, on the other, ovules do not exist in some glandular filaments.

“ My researches have convinced me that frequently enough in the same ovary by the side of glandular filaments containing ovules there exist others of an aspect precisely similar in which the presence of ovules cannot be proved. Generally these filaments not containing ovules are met with in the ovaries towards the end of the first month of extra-uterine life.

“ Glandular filaments have been met with in the human ovary in the young only, authors having found them a very short time after

birth. As for myself, I have only found them in the period of time between the eighth month of intra-uterine life and the end of the first month of extra-uterine life, and it is only exceptionally that I have met with them in the ovaries of children of the age of four years. Plihal has seen a filament filled with epithelial cells in the ovary of a girl aged seven years. One cannot find a conclusive observation of glandular filaments found after this age. There exists only one of Plihal's, who has seen in a girl of eighteen years a filament which Biesiadeski has explained as being a glandular filament (*Drüsen-slauch*) ; but as the author does not give a sufficient description we cannot determine what he saw in this case. Thanks to the kindness of Dr. Ranvier I have been able to examine the ovaries of women at different ages in the histological laboratory of the College of France. From one of these ovaries I obtained a preparation which appears to me to be so interesting that I wish to submit it to the Anatomical Society of Paris. This ovary came from a woman thirty years of age who died of acute catarrhal inflammation of the lungs in the Salpêtrière Hospital, under the care of Dr. Charcot. From the history of the woman it appeared that during life she suffered from epilepsy, that she menstruated regularly, and that she never had any children.

"The right ovary is of normal volume. On the surface are observed some Graafian follicles, the largest of which is as large as a pea.

"On the surface of the section are seen, besides several Graafian follicles of different dimensions, some old yellow bodies having the aspect of irregular greyish spots (*corpuscula albicantia auctorum*) ; the bloodvessels of the ovary are over-abundantly filled with blood.

"The microscopic preparations show the normal structure of the ovary conformable to the age of the individual. Follicles are met with in all states of development, from primordial follicles placed in the cortical substance to the largest, of which some present the aspect of ripe follicles.

"In the cortical layer immediately below that which is called *albuginea ovarii* some glandular filaments are found. These filaments have a form exactly like those filaments which are met with during fetal life : they commence in the peripheric part of the cortical layer and descend nearly to the limit of this layer and the medullary layer. The number of these filaments is but small, and I possess but two microscopical preparations in which they are apparent. They can be distinguished sometimes as a simple tube, sometimes as a ramifying tube. In some directions they are seen filled with cells of the same appearance as those of the epithelial cells of the surface of the ovary which, in this case, are well preserved at some points of the surface. In other directions one sees that the cells are placed near the walls, whilst at the centre of these filaments is observed a cavity. One could not prove the presence of an ovule amongst the cells which filled the filaments.

"The medullary layer does not present anything abnormal except a very apparent hyperemia.

"These preparations show us then that in one of the ovaries of a woman aged thirty years epithelial formations are found which have the form of filaments. In what category of formation should these filaments be ranged? We know that in the ovaries of some animals one finds glandular filaments, which are prolongations of Rosenmüller's body (parovarium). Filaments of this category are always found in the medullary layer of the ovary, and they have never been found deeply placed in the cortical layer. In our case their position in the cortical layer and the absence of similar formations in the medullary layer does not permit us to range them among the formations which may develop from Rosenmüller's body.

"Considering the history of the development of the ovary, we think they are the remains of formations known under the name of strings or glandular filaments in the ovaries of newly-born children. In our case the parts of the filaments which consist of solid masses of cells present an aspect exactly like that of the glandular filaments of children. The parts which present a cavity between the cells ought to be considered as a pathological state of these filaments.

"The recognition of glandular filaments in the ovaries of adult women is of great interest from a pathological anatomical point of view. The works of Wilson, Fox, and Waldeyer have shown that the development of cystic tumours (cystoma) of the ovary always has epithelial formations for its point of departure, having the form of glandular filaments, sometimes massive, sometimes presenting a cavity.

"What is the origin of these glandular filaments? This is a question to which science has not up to the present time definitively replied. Perhaps in some cases they are due to the persistence of those which normally exist in the newly born."—*Annales de Gynécologie*, February, 1874.

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

"The Complete Handbook of Obstetric Surgery." By Charles Clay, M.D. J. & A. Churchill. Third Edition. 1874.

"Maternity Hospitals: their Mortality, &c." By A. B. Steele, L.K.Q.C.P. J. & A. Churchill. 1874.

Communications have been received from Dr. J. Matthews Duncan, Dr. John Williams, Dr. Edis, Dr. Snow Beck, Dr. Bantock, Dr. Barnes, Dr. Wiltshire, Dr. Carter, Dr. Owens, Dr. Charles Clay, Dr. Godson, &c.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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Original Communications.

FATTY DEGENERATION OF THE HEART IN
CHILDREN.

By THOMAS C. HAYES, B.A., M.B., M.R.C.P.

Assistant-Physician Accoucheur, and Assistant-Physician for Diseases of Women and Children to King's College Hospital; Physician to the Evelina Hospital for Sick Children.

MY object in this communication is twofold. In the first place, I wish to direct attention to the acknowledged, but too unfamiliar fact, that fatty degeneration of the heart may occur in the child, and even in the infant. Secondly, I desire to point out that this disease is occasionally—and may be more frequently than is supposed—associated with rickets. This association may be merely accidental, or it may partake of the nature of that between cause and effect. To decide this question a close scrutiny of the hearts of children cut off by rickets will be requisite. If the connexion be one of causation, then fatty degeneration of the heart must be reckoned as one of the causes of death in rickets, and will explain the fatal result more satisfactorily than the somewhat vague expression “the intensity of the general cachexia.”

The morbid changes in the young heart affected with this disease are quite similar to those met with in the heart of the adult under the same conditions, and which have

been so truthfully portrayed by Sir James Paget. He says: "You find, on opening the heart, that its tissue is in some degree paler and softer than in the natural state, and lacks that robust firmness which belongs to the vigorous heart. But what is most characteristic is, that you may see, especially just under the endocardium, spots, small blotches, or lines like undulating or zigzag transverse bands of pale, tawny, buff, or ochre-yellow hue, thick set, so as to give at a distant view a mottled appearance. When you examine portions of such spots with the microscope, you never fail to find the fatty degeneration of the fibre. The yellow spotting, or transverse marking of the heart, may exist in the walls of all its cavities at once, or may be found in much greater degree in one than in the others."* It is hardly necessary to observe, that if a suspicion of the disease be entertained, a careful microscopic examination of the heart should be made, and will always prove decisive.

The symptoms of the disease, judging from the cases that are about to be detailed, are those of a weak and dilated heart—viz., dyspnea, feeble rapid pulse, dropsy of feet and legs, and sudden death.

In two cases the heart was dilated, and in one of these the dilatation of the right side of the heart was so great, as to induce apparent displacement of the organ.

In one case there was aortic and mitral valvular disease. In all the general health had been seriously impaired, and this impairment of the constitution would seem to have lasted a considerable time before the urgent symptoms, and those which can be looked upon as at all characteristic, supervened.

Rickets: Fatty Degeneration of the Heart.—Eva Lee, aged sixteen months, brought to King's College Hospital, January 18th, 1873. Her mother has had fourteen children. This child is still at the breast; has been largely fed on farinaceous food; has never thriven satisfactorily; and is said to have had cough, with more or less wheezing, from the age of six

* "Lecture on Surgical Pathology." Third Edition. Page 95.

weeks. She is very anemic, and cannot sit erect, the muscles being thin and flabby. There are only two teeth cut. She is most fretful, perspires profusely, and cannot bear to be moved about. Both fontanelles are widely open, and the superficial veins are very evident. There is a troublesome moist cough. Moist râles are audible all over both lungs, more particularly at the base of the left lung. The heart is normal. The chest is somewhat pigeon-shaped. The ribs are beaded, and the wrists and ankles are slightly enlarged. The abdomen is tumid and bulging. The liver is uniformly enlarged, its edge reaching beyond the umbilicus. Latterly there has been diarrhea, with very fetid motions. Pulse 80. Resp. 40.

The mother was directed to wean the child, and feed her on milk, eggs, and, occasionally, beef-tea. Iron with cod liver oil was prescribed. Lime water was to be added to the milk.

The child was from time to time under observation till June, but she never seemed to make much progress. On June 21st, the following note was taken:—"During the past week the breathing has become very quick. The child at present seems fighting for breath. Respirations 62 and irregular. The heart's apex beats below right nipple, and the impulse is seen a little way along the right of sternum. Pulse 135, small and weak. No signs of fluid in the chest. Blowing breathing at the base of the left lung. The mother has noticed the beating of heart in this situation for last two months. The legs and feet are much swollen and pit on pressure. Death occurred in a few days.

Autopsy.—The lungs had patches of emphysema along anterior borders, and were very edematous. A large portion of the base of the left lung was collapsed. No fluid in the *pleuræ*. Pericardium contained about 3j of serous fluid. The right side of heart was greatly distended with dark clotted blood, and its apex was pushed down and to the right. The right auricle and ventricle were considerably dilated. The whole heart had a soft, doughy feel. Beneath the endocardium of right ventricle were seen short irregular tawny bands, and all portions of the heart's

cut surface had a dirty yellowish-brown hue. Under the microscope the tawny bands were found to be made up of fibrils transformed into oil globules, some of which had escaped from the sarcolemma. All portions of the right ventricle and auricle were similarly affected, but to a less degree. The transverse markings of the fibrils of left ventricle were faint, and the fibrils were packed with granules. The liver was considerably enlarged ; its substance was very firm. All the other abdominal organs appeared healthy.

Remarks.—When I saw the child on June 21st, I was at a loss to give any very reasonable explanation of the serious change which had occurred since the previous week. The state of the lungs with the distension of the chest was insufficient to account for the great dyspnea and dropsy. But my great difficulty was to explain why the heart was displaced. The autopsy made everything clear. The heart was extremely fatty, and its apparent displacement was obviously due to its great distension and dilatation. The dropsy sprung probably from the same cause, though many things may have concurred in giving rise to it, as the cachexia, the anemia, &c. Death doubtless arose from paralysis of the heart.

*Epistaxis—Fatty Degeneration of the Heart—Purpura.**—James Skinner, aged eight, a little, pale, bloodless boy, who had suffered for the last two months pain in the limbs and occasional epistaxis. Latterly, as he became very weak, his legs used to swell at times. He was under observation for about a fortnight, during which time the epistaxis recurred twice, and it was noticed on the last recurrence of the hemorrhage, five days before his death, how pale the blood was. He appeared to sink from exhaustion, but just at the last, having lain for the previous days in a very drowsy state, he complained of severe pain in the abdomen, and died in a fit of convulsions.

Autopsy.—The membranes of the brain were exceedingly pale, contrasting strongly with a florid clot of blood of about 3j size, which lay in the cavity of the arachnoid to the right

* Recorded by Dr. Ormerod, *Medical Gazette*, 1849, p. 832.

side of the vertex ; otherwise the brain was healthy. The lungs were edematous, with a few purpurous spots scattered over their surface. There were about 3ij of clear fluid in the pericardium. The heart was of the natural size, the outer surface covered with purpuric spots, some of which appeared internally. The whole of both ventricles, both inside and outside, was marked over with numerous little buff-coloured zigzag lines, less thickly set on the right than on the left side, where they quite altered the appearance of the organ. The valves were healthy. Under the microscope the buff-coloured spots appeared to be made up of disorganized muscular fibrils, retaining the external form indeed, but the *striæ* being replaced by irregular rows of little granules of oily matter, and many loose oil globules. The healthy contrasted very strongly with the diseased parts of the heart in the absence of these oil globules, and in the presence of the natural continuous transverse *striæ* instead of the granular dotting of the fibrils. There was a large puckered cicatrix in the great curvature of the stomach. The liver displayed a few purpurous spots. The other organs were healthy.

*Disease of the Aortic and Mitral Valves—Fatty Degeneration of the Heart.**—William Jordan, aged ten, a pale, delicate little boy, who had suffered from dyspnea all his life, had anasarca for a fortnight before admission. There was then to be felt a purring tremor in the second right intercostal space, close to the sternum, and a double murmur to be heard, loudest during the systole and at the base of the heart. The heart's action was very irregular, beating in triplets. He continued under observation in the hospital till February 11th, during which time the auscultation remained the same, and there was little change in his condition from day to day. The only circumstances which attracted much attention were his vomiting almost daily about 5 P.M., and occasional attacks of intense dyspnea about 7 P.M. He remained at home till the middle of May, much the same, when his breathing became more difficult

* Recorded by Dr. Ormerod, *Medical Gazette*, 1849, p. 874.

and his cough increased. Suddenly one morning in his distress he rose out of bed, sat in a chair, then sank down, and died about two minutes after being replaced in bed.

Autopsy.—The *pleuræ* were partially adherent about the base. The lungs were edematous, and, about their bases, congested, as if from commencing pneumonia. The pericardium contained two or three ounces of clear fluid. The heart was much dilated. The mitral valve was a little thickened, but though some of the *chordæ tendineæ* were ruptured, obviously efficient. There were only two aortic valves, imperfectly divided into three, and almost destroyed by ragged ulceration. There were little zigzag buff-coloured lines beneath the endocardium of both ventricles.

Cancrum Oris—*Fatty Degeneration of the Heart.**—A girl, aged nine, had been out of health for some time, and had cough, and enlarged cervical glands—then suffered from cancrum oris, implicating the whole of the left side of the face. She died on sixth day, a partial separation of the slough having occurred. Pulse quick, not irregular.

Autopsy.—The cervical and bronchial glands were enlarged. No tubercles. Slight old pneumonia. Recent fibrinous deposits on the spleen. The whole muscular substance of the heart studded with buff-coloured specks, seen beneath the endocardium and in the parietes. The buff-coloured spots were found to consist of oil globules within the sarcolemma. The heart was otherwise healthy.

* Recorded by Dr. Quain, *Med.-Chir. Transactions*, 1850, p. 174.

ON THE ECZEMATOUS ERUPTIONS, AND ECZEMATOUS ASTHMA OF CHILDHOOD.*

By WM. STEPHENSON, M.D., F.R.C.S. Edin.

Physician to the Edinburgh Royal Hospital for Sick Children.

WHATEVER may apparently be gained in accuracy of classification by the general adoption of the more recent views of dermatologists regarding eczema, I fear we are in danger of losing much in the broader clinical aspects of the subject. That eczema proper, at one time or other of its course, may be papular, vesicular, pustular, or scaly is a clearly proved fact ; and the widening of our conceptions from the narrow limits of vesicles to the broader basis which comprehends the manifold characters of the affection, and the recognition of a unity in these interchanging features, is a great advance. But to strain the idea of unity so as to sweep into this vortex of classification all the affections which may come under eczema used as a generic term, and to discard the older nomenclature, is to introduce error and confusion, which can only retard the progress of this branch of medicine.

This is specially felt in studying the subject in reference to children. Recent writers, under the influence of Hebra and his followers, now regard as mere varieties of eczema, what ought still to be held as distinct affections, and are thereby losing the more definite and practical views of the older writers, who speak of scald head or *porrigo larvalis*, of eczema and of *impetigo*. Each of these terms has become associated with distinct clinical affections, and conveys an idea to the mind not limited to mere external characters.

For the sake of this definite idea I prefer to retain the old names, however inaccurate they may now be. The opinions which determined their assumption are now immaterial, so long as we can convey a definite idea thereby ; and this is the case when we speak of *porrigo*, of eczema, and of *impetigo*. But to say that a child has eczema capitis, may mean either *porrigo* or eczema proper ; or to speak of eczema

* Read before the Medico-Chirurgical Society of Edinburgh, July 1st, 1874.

pustulosum conveys only the appearance of the affection at the time, we know not whether it may be eczema proper or impetigo.

Viewing these affections in their broad clinical aspect, and leaving out of consideration all reference to the complicating question of vesicles and pustules, there will be found sufficient differences to warrant us in regarding them as clinically distinct affections.

They bear a most important relation to age or development. Each of them is connected with a distinct period of childhood. It is this dependence upon development which distinguishes the eczema of childhood from that of the adult. Under its influence we see its character modified according to the age of the child : we find it obstinate under treatment at the earlier stage, and amenable or undergoing a spontaneous cure as the period peculiar to it draws to a close. Porrigio is much more limited in its duration, while impetigo belongs to a later period of development than the other two.

Porrigio and eczema frequently affect several members of a family, but not indiscriminately ; the two I have never seen in the same family. That the tendency to one or other form is due to inherited peculiarities cannot be doubted. Although Hebra is sceptical of an inherited nature, his arguments are entirely against hereditary transmission, which is quite a distinct thing.

For purposes of prognosis and treatment, and for truth sake, I hold that the "scald head," the "porrigo larvalis" of Bateman, and the "achore" of Alibert, is essentially a distinct affection, and is not to be confounded with eczema. It is limited to the period of dentition, and the cutting of each tooth will be found to influence the eruption to a greater extent than in eczema. At the end of that process it shows a marked tendency to spontaneous and rapid cure ; the cases where further prolonged being due to deteriorated health or want of attention. It attacks the head and face, but the skin of the rest of the body retains the soft and elastic characters of health. There is a greater tendency than in eczema at this age to the secretion of pus and the formation of the variety called eczema impetiginodes.

Impetigo is, as I have already said, an affection of a later period of childhood, belonging properly to the period of the second dentition, but to be met with from the third year upwards. The pustular elements predominate, the crusts have quite a different character from those of porrigo or eczema, and there is wanting the profuseness of discharge peculiar to them. Children, moreover, who have never had any affection of the skin are as liable to it as those who have.

Children are liable to a simple form of eczema, limited in extent, and amenable to treatment; to such affections the following remarks are not intended to apply. Such cases are more allied to the affection as it occurs in adults than the forms of which I am treating.

Eczema infantilis proper, is an affection which runs throughout childhood, from the earliest months of infancy to near puberty. It frequently, and in severe cases generally manifests itself as early as the second or third month. It shows a preference to attack the head and face, but the rest of the body is rarely left free from evidence of one or other of its manifold forms. Even in those children who suffer from the head affection in its mildest type, and where there may be a difficulty in determining between it and porrigo, the skin generally is liable to become dry and rough, and subject to prurigo or scaly eruptions in different parts of the body. In these respects it contrasts markedly with porrigo. In the severer forms the influence of age is very marked. Until some time after the end of the first dentition, the secreting element predominates, but the influence of dentition upon it is less marked than in porrigo. In the third year the head generally gets well, and the tendency in the rest of the body is to become scaly or papular, although cases are to be met with where the vesicular character is retained till a later period.

The sixth year I believe may be taken as the natural limit of this constitutional form of eczema. In cases that have continued to this time a decided spontaneous tendency to a comparatively healthy condition of the skin may be observed, or the affection proves much more amenable to treatment at

that age. There is abundant evidence to show that the sixth year marks a developmental period which influences many other affections. After this time should the skin still manifest an unhealthy action it is generally limited to the limbs. I have met with cases where children, who have suffered from eczema in infancy, have continued to be liable up to puberty to scaly and ecthymatous eruptions of the legs, and especially of the inner surface of the thighs.

Regarding this to be the natural history of constitutional infantile eczema, we have in its dependence upon development a ready and satisfactory explanation of its varying phenomena, and the recognition of this relationship is of importance as regards both prognosis and treatment. In the estimation of the results of our remedies it must be kept prominently in view. While acknowledging the spontaneous tendency to improvement as age advances, a counter fact has been impressed on my mind, especially in dispensary practice, and that is that nothing tends more to aggravate the affection and prolong its existence than leaving the disease to itself without proper local treatment. This fact of itself will explain many cases where the character of the eruption has outlived, so to speak, the natural course I have sketched above.

It has generally been observed by writers that children subject to general eczema are very liable to other derangements, and specially of the respiratory and alimentary tracts. Rilliet and Barthez remark: "It is in cases of very extensive eczema that we see, alternating with the diminution or aggravation of the eruptions, tracheo-bronchial or gastro-intestinal catarrhal affections."

There is, however, a complication which, from its close connexion with the skin affection and its marked features, deserves special notice, and may be termed eczematous asthma.

Caillaut* mentions a case, but does not otherwise refer to

* "Diseases of the Skin in Children." Translated by R. H. Blake. London, 1863.

the disease. "In one of the wards of the Hospital for Sick Children," he says, "there is at present under the care of Dr. Sée, a little boy six years of age, suffering from a dartrous affection of the face: every time the eruption disappears the patient is seized with a violent attack of asthma."

Dr. West, in the last edition of his work on the Diseases of Children (1874, p. 341), says: "In other instances the asthma has succeeded to extensive eczema, and so marked is the connexion between the two conditions that I have never known eczema to be very extensive and very long continued without a marked liability to asthma being associated with it. It cannot, however, be said that the two conditions always alternate, the asthma being worse when the cutaneous affection is better; but the radical cure of the eczema is usually followed, though often not till the lapse of three or four years, by the cessation of the liability to asthma."

In the *Edinburgh Medical Journal* for April, 1874, Dr. K. N. Macdonald records "a case of extensive chronic eczema of the face and extremities of seven years' standing in a child, complicated with spasmodic asthma, cured by pitch, soft soap, zinc, and iodide of potassium."

While mentioning this case in connexion with the asthma, I would refer to a few of the details recorded as illustrating some of the points already noted regarding eczema. The affection began when the child was six weeks old. The face and head got well when about three years, but the rest of the body continued to be affected to a severe degree. The attacks of asthma began after whooping-cough, when about three years. The condition of the child when Dr. Macdonald first saw him must have been pitiful indeed. The case is an excellent illustration of the effect of leaving the disease to itself in aggravating and prolonging its existence, and also of the success which accompanies proper treatment when employed at an age when the disease naturally shows a tendency towards recovery.

I have myself met with two well-marked instances of the affection. The first I saw only in consultation at a period

when, it may be said, both the eczema and the chest affection had passed off. The boy at the time was six years of age, tall and well nourished. The eruption first appeared when three months old. From the description received it had been a well-marked case of general eczema. The skin, when I saw him, was dry and rough, but otherwise healthy. The character of the tracheo-bronchial affection is indicated by the mother's report of the opinions of various medical men who had seen him. "Some said it was bronchitis, others false croup, while others did not seem to know what to make of it." So sensitive at one time was the respiratory tract, that passing from one room to another without a respirator was sufficient to induce an attack. There was no relation between the improvement or aggravation of the skin affection and the chest. The improvement in the latter had gradually followed the natural disappearance of the former.

The second case is also a boy, now five and a half years old. The eczema appeared first on the cheek, at two months, spread over the head, and afterwards extended to the whole body. The face and scalp recovered by the end of the third year, and since that time a gradual improvement has been going on in the body. The eruption of each tooth was not accompanied by an aggravation of the disease. The skin of the body at present is healthy, but liable to become dry. The legs, however, are never free from a mixed character of scaly, papular, and at times ecthymatous eruption. There is always, however, a marked improvement when he has been kept in bed a few days by an attack of the chest affection.

The first bronchio-asthmatic attack occurred at two years and five months. It came on suddenly, and was so severe that the medical attendant waited upon him the whole night. They hardly expected him to survive, yet the next day he was sitting up in bed playing with a pet chicken. Since that time till within the last year the attacks have been very frequent, and of varying duration, seldom a fortnight passing without some degree of the affection. I saw him in one severe attack. It presented all the characters of bronchitic

asthma, the lungs being filled with mucus râles and loud rhonchus, with severe spasmodic dyspnea.

When he came under my care the first point to which I directed my attention was to determine the nature of the exciting cause of an attack. There was no indication of any metastatic relation between the skin and the chest. It had been observed that after laughing much the respiration became audibly wheezy. He was only allowed out of doors on fine days, but if the wind was in any way strong, he was liable to difficulty of breathing at night. As, however, attacks often occurred without any apparent exciting cause, I directed a careful watch to be made regarding his food, with the result that he was always best when kept strictly on a simple milk diet. During the last six months, while attention has been paid to this point, he has only had two severe attacks, and in both instances an indiscretion in food could be assigned as the cause; and during this time he has been allowed to run about out of doors with a freedom they formerly did not dare allow.

He had, under the care of the late Dr. Carmichael, been treated with all the regular remedies for the skin affection, including arsenic, and his mother had bestowed the greatest attention in carrying out the treatment, but she cannot say that anything had any marked effect. Finding that there was a constant sibilant rhonchus in the chest, I prescribed two grains of iodide of potass. with one drop of tr. cantharides three times a day, and potash or Vichy water ad libitum. Under this treatment, with the regulation of the diet, he has had only two attacks in six months, and is evidently steadily improving. While believing that this treatment has not been without effect, I still keep in view that the age of the child is that when the greatest success may be looked for from the natural developmental tendency towards recovery.

INTRA-UTERINE STEM PESSARIES.

By CLEMENT GODSON, M.D.

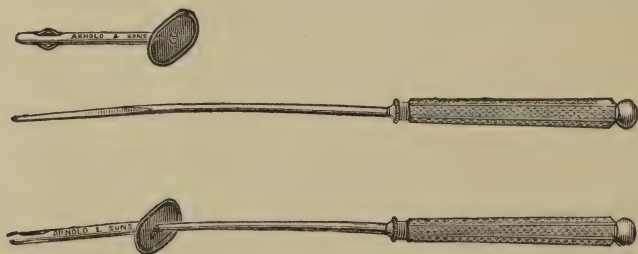
Physician to the Samaritan Free Hospital for Women and Children.

IT is not my purpose to discuss the merits of intra-uterine stems in gynecological practice, but to describe a new form of stem which I have lately had manufactured for me by Messrs. Arnold and Sons, which I have found very serviceable, and which I believe to possess some advantages over other stems in use.

The chief points of recommendation are these ; excessive lightness, and a special means of being retained *in situ*, which may or may not be employed.

It is obvious that the less weight there be in the stem, the less likely is it to fall out, or to drag upon the uterus, and therefore the more comfortably may it be worn.

The stems, which are figured in the accompanying diagram,



are composed entirely of aluminium, and are so light that if placed on the palm of the hand at some distance from the mouth, they can with very little effort be blown off it.

They are manufactured in five sizes, Nos. 4, 5, 6, 7, and 8 ; the respective weights of which are 17, 19, 25, 28, and 30 grains. In comparison with the silver stems hitherto employed they are about half the weight. The *largest* aluminium stem, No. 8, is three grains lighter than the *smallest* silver stem in ordinary use, No. 4, which weighs 33 grains, while the largest No. 8 silver weighs 56 grains.

I find, and I attribute it to this property of lightness, that the aluminium stems have as a rule no tendency to get

displaced. But in some cases this old trouble arises ; to obviate which, I have contrived a spring which can be subsequently inserted ; it has simply to be pushed up the canal of the stem, when it springs through the perforation and expands into the cavity of the uterus, thus fixing itself. The drawing shows the stem, after this has been adapted. I advise this spring to be applied only when the simple stem has been tried and failed. There is a certain amount of objection in my mind to anything which projects against the uterine wall. I have been obliged to desist from using the flexible india-rubber stems, because of the hemorrhage occurring and obstinately continuing after their introduction, which has subsided immediately after their removal, and this I believe to be caused by the points, which play against the uterine walls, keeping up incessant irritation. In nearly every case too of ante flexion which I have treated with the flexible stem, I have found, while *it* has been in place, the uterine body was as plainly to be felt anteriorly as before its introduction. This of course cannot be the case so long as the aluminium stem remains *in situ*.

Reports of Hospital Practice.

UNIVERSITY COLLEGE HOSPITAL.

LABOUR COMPLICATED BY A FIBROUS TUMOUR OF THE UTERUS. — EXPULSION OF THE TUMOUR THREE WEEKS AFTER THE LABOUR.—RECOVERY.

Under the Care of JOHN WILLIAMS, M.D. (Lond.), *Assistant Obstetric Physician to University College Hospital.*

MRS. M., aged thirty-seven years, has had seven children ; all her past labours were of a lingering character, but instrumental interference was not called for in any one of them. About the sixth month of her present pregnancy she was "taken with pains just like labour pains." They were preceded by a "show," and returned regularly at intervals of

about fifteen minutes. They continued for a day and a night, and then gradually ceased. About this time she had an attack of vomiting which lasted for a fortnight. The patient said that she vomited every five minutes, and that "the basin was never away from her." She suffered from attacks of vomiting about the sixth month in each of her last three pregnancies. Two months later—that is, about the eighth month of her present pregnancy, she had another attack of vomiting, which lasted a week, but it was not accompanied or preceded by labour-like pains.

On the morning of August 1st she was taken in labour, and when I saw her about nine o'clock on the evening of the same day, I found that she had lost a small quantity only of blood; the os uteri was high up and on the left side, and admitted two fingers; the cervix was about one and a half inches in length; the canal of the cervix ran obliquely upwards and to the left; the membranes were ruptured, and the head could be felt in the left iliac fossa. In the lower part of the wall of the uterus immediately above the junction of the body and cervix, on the right side of it, and occupying the right iliac fossa, was a smooth round tumour about the size of a fetal head. It could be easily examined by the bimanual method of exploration. It was very soft on the side turned towards the uterus, and a fine trocar was introduced through the cervical canal, and thrust into the tumour. It was thus found that, though the uterine surface of the tumour was soft, its interior was hard and resistant.

The child was with some difficulty turned by the feet, and delivery was rapidly completed without meeting with any further obstacles. The child was born dead. The uterus contracted well, but was much larger than natural, the tumour remaining still nearly of its original size. There was but slight loss of blood.

The lochia were profuse for several days, and the patient complained of some soreness over the lower part of the abdomen. The bowels remained also obstinately confined, so that there was great difficulty in obtaining relief by stool.

On the 10th of August the patient complained of labour-like pains ; these continued off and on until August 20th, when the woman felt a sudden desire to go to stool, and while on the night-stool the tumour was expelled through the vagina. It was pedunculated. The pedicle was tied close to the cervix uteri, and the tumour removed. It was softish on the surface, of a dark red colour, weighed one pound, and had a very offensive odour.

The expulsion of the tumour was accompanied by but slight hemorrhage, and from that time the patient improved rapidly, until on August 28th she became an out-patient of University College Hospital.

At the end of September she had a profuse loss of blood from the vagina, lasting a few days. On October 10th, the uterus, on examination, was found somewhat larger than natural. The discharge of blood had ceased, and the patient felt well. She has not visited the hospital since that date.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

AUGUST, 1874.

RECREATIVE CHANGE.

URGED by a natural craving and a salutary custom, many medical men are now making arrangements by means of which they will be able to obtain recreation and change of thought, act, and scene. Exhaustion, consequent upon continuous tension, invariably ends sooner or later in restlessness and irritability, and then the great vital law of change which runs through the whole universe asserts itself, and powerfully impels the jaded to cease from labour and shun their labour-fields. Unfortunately during the past year we have seen in our own branch of the profession several melancholy examples of the fatal result of neglecting these beneficent promptings. There are some who cannot be made to heed them, and strange to say, of all offenders,

those who are most successful are often the greatest. It is the old story of much would have more, and thus we find the man who has a lucrative practice and is accumulating money, the one most difficult to move. His excuses are innumerable. In vain it is pointed out to him that for his own benefit and for the sake of his family and patients diversion is necessary. Ambition lures him on, and his brave heart battles against the warnings of failing mind and body, until at length a crisis arrives, and then that cessation from work which might have been enjoyed at a convenient season for a suitable period, is enforced, most probably at a very inconvenient time, upon a bed of pain amidst sorrowful faces. It is sad that medical men, who ought to know better, should so often err in this way. There must be amongst them either a want of faith in the practical advantages of recreation and rest, or a wilful blindness to unmistakable indications. They would despise a farmer whose fields lacked fertility because he would not grant them a fallow season, and yet they will not grant themselves that pause from labour by which alone they can gain vigour and encompass success. What appears for the time a loss is in reality an excellent investment. The enervated man does his work ineffectively, laboriously, and tardily ; with restored energy he can do all with ease and enjoyment. There is, however, another great advantage in getting quite away from the scenes of our labours. It enables us to take a distant and independent view of our home position and mode of living. Amidst hills and woods and streams, we can take, as it were, a bird's-eye view of our other selves as we appear in our ordinary lives, and accurately survey our every-day habits and actions. The impartial prospect thus obtained is very valuable, as it enables us to see clearly what ought to be remedied and what improved. Fresh projects flash upon the mind, and the futility of misdirected exertion becomes manifest. By rest and change alone we can recreate our effete lives and renew our lost energies. We may work in one groove until we become buried in it, our vision contracted and our intellectual life stifled. The essentiality of life is change. Immutability is death.

Notices and Reviews of Books.

The Puerperal Diseases. Clinical Lectures delivered at Bellevue Hospital. By FORDYCE BARKER, M.D. London: J. & A. Churchill, 1874. Pp. 526.

THIS Transatlantic work is very welcome. It comes from a conscientious and careful observer, and is written in most agreeable English. Each lecture is prefaced by a characteristic and explanatory case, and is full of practical experience and interesting clinical observations. Dr. Fordyce Barker holds an exalted estimate of the branch of the profession he practises. He says:—

“At the present day, for the first time in the history of the world, the obstetric department seems to be assuming its proper position, as the highest branch of medicine, if its rank be graded by its importance to society, or by the intellectual culture and ability required, as compared with that demanded of the physician or the surgeon. A man may become eminent as a physician, and yet know very little of obstetrics; or he may be a successful and distinguished surgeon, and be quite ignorant of even the rudiments of obstetrics. But no one can be a really able obstetrician, unless he be both physician and surgeon. And, as the greater includes the less, obstetrics should rank as the highest department of our profession.”

The first lecture is upon “Puerperal Convalescence.” In secondary hemorrhage, during this period the author’s treatment is to remove all clots, to keep up pressure on the uterus, to stimulate uterine contraction, to place ice in the vagina, or inject into the uterine cavity half an ounce of the solution of persulphate of iron, diluted with an equal quantity of water. If there be no shock from loss of blood he gives ergot and nux vomica; if there be, he commences with laudanum and stimulants until the reaction is established. He also recommends in cases of secondary hemorrhage, produced by retention of a portion of the placenta, an enema of one ounce of oil of turpentine, with half an ounce of olive oil, slowly injected and retained as long as possible. The following lectures are upon the diet of puer-

peral women, lacerations of the perineum, thrombus of the vulva and vagina, puerperal albuminuria, puerperal convulsions, lactation, mastitis and mammary abscess, puerperal mania, relaxation of the pelvic symphysis, phlegmasia dolens, puerperal thrombosis and embolism, puerperal phlebitis, puerperal metritis, puerperal peritonitis, pelvic peritonitis and cellulitis, puerperal septicemia and pyemia, and puerperal fever.

Dr. Fordyce Barker is a staunch believer in therapeutic remedies, he is convinced that quinine is nearly as valuable and efficient in the treatment of pyemia as in that of intermittent fever. He gives ten or fifteen grains of it in a morning, and fifteen or twenty at night, and if it is not well tolerated, he adds ten or fifteen grains of bromide of potassium to each dose.

In reducing vascular excitement *veratrum viride* is his favourite remedy. He does not fear the state of collapse which its continuous exhibition produces, as it is, he says, only very temporary, and never terminates disastrously. By its means he brings the pulse down to 80 and holds it there. In puerperal fever, he commences by giving five drops of the tincture every hour; and if a decided impression be not made on the pulse after two or three doses, he increases each dose by one drop, until a pulse which may have been 140, is brought down to the normal standard. The author holds very distinct views concerning puerperal fever, and makes his confession of faith in the following propositions:—

“1. There is a fever which is peculiar to puerperal women, and is, therefore, appropriately named puerperal fever.

“2. The symptoms of this disease are essential and are not the consequence of any local lesions, and it is as much a distinct disease as typhus fever, typhoid fever, or relapsing fever.

“3. It belongs to the class of zymotic diseases, and results from some unknown blood-changes.

“4. We are as ignorant of the specific cause of these blood-changes as we are of those which develop relapsing fever, scarlet fever, or any of the other essential fevers.

“5. The determining cause of this fever may be either epidemic influences, contagion, infection, or probably, nosocomial malaria.

“6. Any of the local inflammations may occur in the puerperal woman without puerperal fever; and, on the other hand, puerperal

fever may be so severe as to destroy life without sufficient local disease to account for the symptoms or explain the cause of death.

“7. The specific causes which develop the exanthemata, such as scarlet fever and small-pox, may develop the specific disease with intense malignancy in the puerperal woman; but this does not transform the disease into a puerperal fever.

“8. Septicemia may be developed in a puerperal woman, either from autogenetic or heterogenetic infection, without puerperal fever, but this infection may also complicate puerperal fever.

Dr. Fordyce Barker's book is the only work in our language devoted entirely to the consideration of puerperal diseases. It is not, however, exhaustive. Puerperal tetanus and other complications which perhaps have not hitherto been met with clinically at the Bellevue Hospital are not included, but will doubtless find place in another edition. We can confidently recommend the volume as full of valuable practical information. The experience of the author, which is frankly and clearly given, will be found most useful to all those practitioners who have the misfortune to have to treat the serious diseases which occur after delivery.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, July 1st, 1874.

E. J. TILT, M.D., *President, in the Chair.*

Medullary Cancer of the Cervix Uteri.

Dr. HAYES stated that, though the report on Dr. Daly's specimen, exhibited at the last meeting, was not quite ready, there was no doubt about the case being one of malignant degeneration.

Instrument for Relief of Antelexion.

Dr. GALTON exhibited a curved metal stem supporting a boxwood crutch, which passes up into the anterior cul-de-sac of the vagina in front of the cervix uteri, being kept in position by a spring resting externally on the pubis, the two being connected by a swivel joint, which allows of a free movement of rotation of the inner limb. The case in which it had been successfully employed was a very aggravated one, the lady

being confined to her couch, and morphia injections hypodermically being resorted to twice daily during the ménopause, and thrice daily during the periods, without affording more than temporary relief. The instrument was worn continuously for three years, and succeeded perfectly in relieving the patient. In another case of antelexion complicated by fibroid of the fundus, the employment of the instrument was only attended by temporary relief, and in another case its use was not persevered in. Dr. Aveling had called attention to a similar form of instrument in 1869. Dr. Galton thought the case worth recording as showing that antelexion could be successfully treated without resorting to intra-uterine stems, which Dr. Marion Sims stated had been entirely discontinued in America, but were still recommended by many practitioners in England.

Dr. ROUTH could not understand how the instrument kept in position.

Dr. AVELING thought there would be a difficulty in getting the spring to act properly in fat women.

Dr. J. C. HAYES exhibited the macerated os innominatum of the case of malignant disease shown at a previous meeting.

Dr. Hayes also exhibited the uterus and appendages of a patient who had died under Dr. George Johnson's care from heart disease, which was probably congenital. She was twenty-eight years of age, single, and had complained of no uterine symptoms. The catamenia were absent the last four months of life. Both ovaries were found, post-mortem, prolapsed (the uterus occupying its normal position); they were uniformly enlarged, the right one containing a cyst about the size of a pea, the left one having three similar cysts, which appeared to be aborted Graafian vesicles. Attached to the right broad ligament between the fimbriated end of the Fallopian tube and the outer margin of the ovary was a fluctuating sessile cyst, of a pear-shaped form, about the size of a plover's egg, which had probably originated in one of the tubules of the organ of Rosenmüller.

Dr. Hayes also exhibited a fatty placenta taken from a patient who furnished a very instructive history. She was thirty-seven years of age; married sixteen years; there were no grounds for any suspicion of syphilis. She bore three living and perfectly healthy children. During her fourth pregnancy she received a severe fright, and shortly afterwards was delivered prematurely of an eight months still-born fetus. Her health then began to fail, and in succession followed twelve still-born children, nearly all of which had reached at least seven months maturity. During the last four or five pregnancies she had suffered from serious and frequent hemorrhages, dating from the third month of gestation, and occurring sometimes every fortnight till labour supervened; they were quite sudden and without any recognisable cause, and came in gushes, not unfrequently during the night, unattended by pain.

When first seen on February 7th, 1874, she was four months advanced in pregnancy, and had had two serious losses of blood. She was very anemic, and extremely debilitated. Rest was enjoined, and ℞ of liq. ferri perchl. prescribed thrice daily. Her colour and strength rapidly came back, and there was no return of the hemorrhage. Fetal movements were distinctly felt until within six days of labour, which happened at full term, and the fetus, though small, bore all the appearances of maturity, and seemed to have been dead about a week. Since the birth of her last living child gestation had never continued so long.

The placenta was small, weighing only 12½ ounces. It had a pale yellowish appearance, and contained little blood. Nodules of fat, characteristic to the naked eye, were studded over the maternal surface, especially along its margin. The fatty change was most advanced towards this surface, a large portion of the decidua being merely an aggregation of oil globules, the adjoining fetal villi with the investing chorion were seriously affected, but those close upon the fetal surface were simply granular in appearance. Dr. Hayes referred to Dr. Barnes' investigations of this disease, published in the *Medico-Chirurgical Transactions*. He considered the disease in this case to have originated in the maternal portion of the placenta, this view being borne out by the weakly condition of the patient and microscopical examination. No doubt the previous premature births and the hemorrhages had been due to the same condition of placenta. He could not regard the disease as originating in placentitis; this was contrary to all analogy. It was a degenerative change, occurring under the same conditions which induced fatty heart, fatty kidneys, and fatty arteries in the brain. Should the patient become again pregnant, the propriety of inducing artificially premature labour would be considered.

The PRESIDENT suggested that Dr. Aveling should examine the case of prolapsed ovaries with Dr. Hayes.

Dr. HEYWOOD SMITH thought the cyst in the ovary was sufficient to account for the prolapsus.

Dr. HAYES thought it could not be explained in this manner.

Dr. BARNES, in reference to the case of fatty placenta, thought that the case proved that the disease may originate during the life of the child. This notion had been controverted; it was said to take place after the death of the child, but it was hardly possible that all this mischief could have occurred in the short time after the death of the child. It was much more likely to have preceded this event, and in fact caused the premature destruction of the child. As regards the change commencing in the maternal or fetal portion of the placenta, it affected mainly the villi of the chorion. He had not stated that the change arose from placentitis, he likened it to fatty degeneration of other organs. The case was full of interest, and had important pathological bearings.

Pelvic Hematocele.

Dr. ROGERS exhibited a specimen removed (post-mortem) from a patient who had been married nine years. Had one child seven years previously. Never pregnant since, nor had any miscarriages. For twelve months past she had felt at times pain in the lower abdomen, especially at the catamenial epochs, when the losses had been very great. She had noticed a tumour in the abdomen for seven weeks before admission, though believes it might have been there much longer. On examination it was thought to be a fibroid of the uterus; it was mobile, filling up the left side of the pelvis. A sponge tent was inserted in the cervix, and subsequently a sea-tangle tent; the posterior wall was felt to be hard and apparently solid. The uterine sound passed $3\frac{1}{2}$ inches. Four of his colleagues examined the patient, and together with Dr. Greenhalgh, believed it to be a fibroid of the posterior wall of the uterus, which might be treated by enucleation. The pulse went up to 135, and the temperature to 104.5° F., and sickness and increased pain ensued. These symptoms subsided under the influence of salines and opium. On June 27th she suddenly complained of faintness and icy coldness. Hot water was applied to the abdomen and stimulants administered, but she died apparently from syncope shortly afterwards.

On making a post-mortem examination, on opening the abdomen, a large central tumour, resembling a pregnant uterus at the fifth month, was seen. It was mobile, and there was a quantity of fluid and some clotted blood in the pelvic cavity. On incising the tumour it was found to be filled with a hard, firm, black mass, which was turned out and examined; it was structureless and whitish in parts. The uterus measured 5 inches in length and 3 broad. Behind, above, and around this, the cyst had formed and lengthened out towards the right ovary, being about the size of a child's head. The right Fallopian tube was closed, and on the external surface seemed to pass into the right ovary, which contained a hard, stellated mass. The cyst appeared lined by membrane composed of two layers. On examining the stellated mass, nothing but blood corpuscles and fibrin could be detected.

The PRESIDENT inquired when the hematocele originated.

Dr. ROUTH stated that when he saw the body on the post-mortem table, the breasts presented all the signs of pregnancy; and on opening the abdomen, it still looked as if she were pregnant; and even now it was a question whether it was not a case of extra-uterine fetation. If it were a hematocele, there must have been a gradual oozing of blood for six or seven weeks, and a sudden increase on the day of her death. The lining membrane of the uterus did not present the appearances of a decidual membrane.

Dr. BARNES related that he had seen two cases of hematocele during the last month. In one, ending fatally, the cyst was opened during life, per vaginam, and blood removed; the cyst was curiously

mobile. In the other case no opening was made into the cyst. He considered formerly that the danger of the cyst rupturing into the peritoneum was small, but now he thinks it more serious. If the hemorrhage goes on and the cyst increases in size, puncturing should be resorted to. In another case where the hematocele was clearly mapped out, spontaneous opening into the roof of the vagina occurred, and the cyst gradually contracted and closed, the hematocele disappearing.

Dr. PROTHEROE SMITH asked Dr. Rogers, if he had from the history of the case, or from the ordinary symptoms which indicate the formation of hematocele, suspected the nature of the malady before death. He had now a similar case in the Hospital for Women, which was admitted with a large swelling occupying the left sacro-iliac fossa, and extending beyond the mesian line to the right, having the semi-elastic doughy feeling which indicates hematocele. Active symptoms of great constitutional distress having supervened, with a high temperature and quick pulse, he used the aspirator, per rectum, and the escape of broken-down coagula of blood declared the diagnosis, and was followed by amelioration of symptoms, and a continued discharge of fetid black matter.

The PRESIDENT remarked that as there seemed to be some obscurity about the case, he would refer it to Dr. Rogers and Dr. Heywood Smith.

Serrated Scissors.

Dr. PROTHEROE SMITH exhibited some newly invented scissors manufactured by Messrs. Meyer and Meltzer which by transfixing and cutting clean through any tissue insured a smooth and definite incision to any previously determined extent. One pair was straight, having one blade probe-pointed for dividing the cervix uteri; another was curved to facilitate the removal of condylomatous growths or tonsils. Bony structures could also be severed by them. He had recently employed them for extending the abdominal incision in a case of ovariectomy, making smooth and even edges. Dr. Richardson's toothed scissors were efficient for perforating and tearing as in mastication, but did not act like Dr. Protheroe Smith's.

Dr. BARNES referred to Kuchenmeister's metrotome scissors, one blade of which is provided with a small recurved hook, as being similar in principle. Dr. Richardson's scissors answered well, but did not give additional security against bleeding.

Dr. AVELING thought that in cases of hysterotomy, there was an objection to the employment of scissors, as they produce disfigurement and distortion of the parts subsequently, and divided portions of the cervix which ought not to be touched.

Inversio Uteri.

Dr. CHAMBERS related the particulars of a case occurring in the practice of a midwife where the inversion was complete. The patient, aged twenty-seven, was safely delivered, this being her second labour; half an hour afterwards hemorrhage commenced; the placenta not being expelled, traction was made on the cord. There was severe abdominal contraction, a violent shriek of pain, and a round ovoid body protruded from the vulva; the hemorrhage was very severe. Dr. Chambers was sent for, but not being at home his nephew went. On his arrival he found the patient cold, exsanguine, gasping, moribund. The placenta was removed, and an attempt made to return the uterus, but unsuccessfully. On making a post-mortem twenty-four hours after, rigor mortis was well marked. The body was well nourished, and the uterus was found to be partially re-inverted, and gave the idea that had the patient been seen earlier before she had lost so much, and the efforts at returning the uterus been persevered in, complete reduction would have taken place. The patient was seen too late to allow of transfusion being attempted.

Retention of Urine from a Retroflexed Gravid Uterus.

The patient, aged thirty-two, had borne four children, the last over three years since. She had been regular till November, and until February believed herself pregnant, when, whilst hanging clothes on the line a pig bit her foot and frightened her very much; this was followed by pelvic pain and a vaginal discharge. Rest was enjoined, and she went on well for a week; she was then seized with sudden severe abdominal pain, the abdomen began to swell, and she lost health rapidly. Seven weeks afterwards the abdomen measured thirty-nine inches at the umbilicus. The case was supposed to be ovarian; a tense elastic tumour giving a thrill of fluctuation being detected. On passing a catheter, twelve pints of urine charged with blood were drawn off, but it had little or no uriferous smell. After this, the abdominal tumour decreased in size. On further examination a retroflexed gravid uterus was detected. The patient being much exhausted, she was left until the next day, when Dr. Barnes saw her. The pulse rose to 144°, there was excessive tenderness over the abdomen. The uterine sound passed in three inches upwards and forwards, and the case was looked upon as hematocele; but on passing the hand into the vagina, a fetus of four or five months maturity was removed. The uterus was found to be fixed in the pelvis. The patient being very exsanguine, transfusion with lamb's blood, to 10 oz. was resorted to; there was a faint attempt at restoration, with much excitement. The patient died one hour afterwards. On making a post-mortem, an elastic tumour was detected in the abdomen, the bladder being filled with two pounds, by weight, of black clotted blood. At the fundus of the bladder was a hardened

infiltrated mass from which the hemorrhage had taken place. The transverse muscular fibres were very well seen. The uterus was found to be retroflexed.

Dr. GODSON referred to a case of retroflexion of the gravid uterus with cystitis, where the whole of the lining membrane of the bladder came away, exposing the muscular fibres. The patient went to her full time, was safely delivered, and is still living, though she cannot hold her water for more than a few minutes.

Dr. BARNES stated that he considered the patient died from retroversion of the pregnant uterus; though there were symptoms of peritonitis, none was detected post-mortem. She died from exhaustion and uremia.

The PRESIDENT requested Dr. Chambers and Dr. Hayes to examine the specimen further and report upon it.

Intra-Uterine Tumour. Removal. Subsequent Pregnancy. Delivery by Turning. Post-Partum Hemorrhage. Recovery.

Dr. WYNN WILLIAMS related the particulars of a case where severe uterine hemorrhage had been going on for a twelvemonth in a patient aged thirty-four, who had had two children, the last one more than three years previously. In a subsequent miscarriage she nearly died of hemorrhage. When first seen, the abdomen was found to be as much distended as a woman's would be at the full term of pregnancy; a large intra-uterine fibroid or polypoid growth was removed by means of the écraseur in several successive operations. She made an excellent recovery. Eleven months afterwards she aborted at the third month, and had severe hemorrhage. She again became pregnant, and on labour setting in, the uterus was found to be high up above the pelvic brim, the head presenting. After waiting several hours, chloroform was administered and turning accomplished after much difficulty, a dead child weighing ten pounds being ultimately extracted. Hemorrhage supervened three hours after delivery. A piece of sponge saturated with equal parts of liq. ferri perchl. and water was passed into the uterus and the bleeding ceased forthwith; the sponge was withdrawn on the following day.

The PRESIDENT remarked that the case was interesting as showing the occurrence of pregnancy after the removal of a fibroid weighing eighteen ounces, and the influence of the iron in restraining the hemorrhage.

Dr. AVELING thought that the method of using the iron, leaving the sponge in utero, was a questionable proceeding. The contraction of the uterus rendered the withdrawal of the sponge difficult, and if the string attached to it should break, it would be very awkward. He considered it a bad practice.

Dr. HEYWOOD SMITH thought that in operating for fibroids of the uterus it should be done rapidly, as Dr. Marion Sims suggested, so as to avoid septicemia.

Dr. ROGERS thought the whole of the mass had been taken away at two sittings, one in the evening and one next morning.

Dr. ROUTH remarked that when matters were retained in utero we did not get septicemia, it was only when they were partially expelled in the vagina. The application of plugs dipped in tincture of iodine to the surface, renewed every three or four hours, would succeed where carbolic acid failed in averting septicemia.

The PRESIDENT alluded to some cases where a practitioner in Cuba injected a solution of iodine and iodide of potassium into the uterus immediately after parturition with a view to prevent puerperal mischief.

Dr. CLEVELAND doubted the propriety of administering morphia so soon after delivery, especially if the uterus had not properly contracted. He would have preferred to watch the patient.

Dr. WILLIAMS, in reply to Dr. Aveling, stated that he had never experienced any difficulty in removing the sponge; the contractions of the uterus forced the sponge out into the vagina. He considered the success of his method mainly attributable to it. In early abortion and in non-pregnant uteri he preferred swabbing out the cavity of the uterus with the iron. In reply to Dr. Routh, Dr. Williams stated that he himself had introduced the employment of iodine as an antiseptic. Even tainted meat, washed with a solution of $\frac{3}{4}$ of tincture of iodine to $\frac{3}{4}$ of water, became perfectly wholesome.

On Vaginismus.

Dr. W. SCHNEGIERIEF, Physician to the Moscow Hospital, read a paper on this subject.

After alluding to the conflicting statements of Dr. Marion Sims and Scanzoni, he related the history of several cases that had been under his own care, showing that there were two different forms of the disorder, the one being regarded as inflammatory and the other as nervous or hyperesthetic.

Dr. EDIS thought, after carefully perusing the paper, that the deductions drawn from the first case cited scarcely carried conviction. She was a *virgo intacta*, and was only seen once. The second case seemed due to vaginitis and granular cervix. The paper was a most instructive one, and would form a valuable addition to the *Transactions*; the cases being given in a clear and graphic manner, and the observations on their pathology and treatment well worthy of perusal.

The PRESIDENT remarked that he had only met with one case where no tangible cause existed. She was very nervous, and subject to epileptic fits. In all other cases some definite cause for it had been discovered, such as ulceration, &c. He considered Dr. Marion Sims' operation very rarely necessary; forcible dilatation, under chloroform, by means of the two thumbs placed back to back, being generally sufficient to overcome the obstacle.

Dr. JOHN WILLIAMS remarked that in the first case alluded to by Dr. Edis there were three distinct painful points, which, when touched, caused spasm of the urethra. He thought the paper one of great interest.

OBSTETRICAL SOCIETY OF EDINBURGH.

Meeting, May 13th, 1874.

Dr. J. MATTHEWS DUNCAN, *President, in the Chair.*

Dr. MILNE showed a preparation illustrating one variety of bowel found in cases of imperforate anus. The bowel terminated in the bladder, near the neck, which was probably about the most frequent arrangement in these abnormal cases. It was said that these cases were exceedingly rare—one in 20,000 or so. He rather thought from his own experience, and the number that had been brought before the Obstetrical Society, that they were more frequently met with. In this case he had incised and endeavoured to reach the bowel, but was unsuccessful. Meconium soon passed by the urethra, showing the hopelessness of treatment. It was only in those cases where the bowel extended to near the normal site of the anus, and where it could be drawn down and stitched to the skin, that we could hope for effective surgical interference.

Suppuration of a Dermoid Cyst after Delivery.

By Dr. LINTON.

Mrs. M., aged thirty-six years, was delivered of her third child on the 21st of November last, after a comparatively short and easy labour; in which, however, the forceps had to be used, on account of the feebleness of the pains, the head having remained at the outlet for about an hour. Her two previous labours were natural and easy, and required no instrumental assistance. On the fourth day after delivery she was seized with a rigor, followed by smart pain over the abdomen, which was intensified by pressure, but relieved, and finally made to disappear, by hot turpentine poultices and opiates. She was able to be out of bed by the tenth day, but complained much of weakness, and slightly of abdominal pain on attempting to walk.

In this condition she remained for a fortnight, when, after having been out of doors for a short walk, she was seized suddenly with retention of urine, which was only relieved by the catheter. She was enjoined to keep her bed, and the bladder was emptied in the same way some five or six times, after which she was again able to pass her water voluntarily. Two days after the commencement of the retention, the urine showed a copious deposit of pus, the reaction

being acid. The pus, however, disappeared in the course of a few days.

Thinking that some sudden change in the position of the uterus must have occurred and been the cause of this retention, I examined per vaginam, and found the os difficult to reach, and pressing high up behind the pubic symphysis ; while lower down and in the cavity of the pelvis was felt a large swelling—about the size of an orange—hard and resisting, quite fixed, and without pain on pressure. My first thought was that I had here a retroverted or retroflexed condition of the uterus, surrounded and fixed by inflammatory deposit ; but that supposition was dispelled by the use of the sound, which showed the uterus to be simply raised, with its posterior surface resting against the upper and anterior surface of the swelling. In the lower part of the abdomen, just over the pubic margin, the uterus could easily be felt, as also to its left a considerable amount of hardness. There was more or less pain on pressure over these.

Matters continued thus for about a month, the only noticeable difference being in the size of the swelling, as felt per vaginam and per rectum, which was considerably increased, and appeared softer and more fluctuating.

The patient's strength sensibly diminishing—the pulse remaining quick and feeble, the stomach irritable and refusing food—I asked Dr. M. Duncan to see her along with me, which he accordingly did. He diagnosed a suppuration or abscess. A large tumour, very hard, but with some elasticity as if it contained fluid, was felt filling the recto-vaginal space, pushing the uterus forwards and upwards. This tumour did not feel like a common perimetritic abscess, for the finger passed per rectum felt that gut separated from the tumour, just as is felt in a case of non-adherent ovarian cyst in the same situation—not the feeling of an abscess or hœmatocele. This feeling of separation could not be made out per vaginam. On the 28th of February, Dr. Duncan, by exploratory puncture, ascertained the purulent character of the contents of the tumour, which he then freely opened by bistoury.

The amount of pus collected on opening the abscess was twenty-four ounces. It was impossible to collect any afterwards, but the quantity for the first week was very considerable, and even now (18th April), seven weeks after the operation, there is a copious discharge of thick yellow pus.

Passing his finger into the cyst, Dr. Duncan easily made out its real nature, feeling in it a mass of hair and several bits of bone, of which one was as big as the nail. Seizing this mass of hair by a forceps, he extracted it and the bone as well.

The mass of loosely convoluted hair is of a light yellow colour (the woman's being dark), and of the size of an orange, only it is not so spherical, having an elongated spheroidal shape. About it is much fatty matter, the latter being deposited in a thick layer over one side of it. The hairs are of different lengths—the majority seeming

to be about two inches long. (They were not examined to ascertain whether they possess bulbs.) Passing through the upper part of the mass is a fibrous cord, scarcely so thick as a goosequill, which appears to have stretched across from one side of the cyst to the other. Its extremities are large and irregular and ragged in their margins, and seem to consist of portions of the walls of the abscess torn away in the extraction of the tumour. Within these expanded ends the cord is hollow to the extent of a little more than half an inch, but throughout the rest it is solid, no air being able to pass.

25th April.—The discharge is now very slight, and the opening made, which three weeks since would admit the point of the finger, cannot now be felt. On examination per vaginam, the os uteri is found occupying a position about the centre of the pelvis, and surrounded by much hard swelling, and appears immovable unless when pressed from above the pubes. Per rectum, the posterior surface of the swelling can be felt, along with a fold as if from bowel passing across it; while to its left, and apparently in connexion with the left ovary, is a swelling about the size of a walnut, having a smooth and elastic surface.

Though still very weak, patient has been able to be removed to the country.

Dr. BURN said he had seen three cases of dermoid cyst. After opening, some of them took six or eight months to heal up. The contents were usually hair, teeth, &c. In one which was opened by Sir James Simpson, the woman got on well, and had a child afterwards. In another the woman has not had children for some considerable time.

Meeting, March 25th, 1874.

Case of Fibroid of the Uterus, complicating Pregnancy, and proving fatal by Torsion of the Pedicle.

By JAMES CAPPIE, M.D.

As unfortunately I took no notes of the following case at the time of its occurrence, I am only able to detail its history in a general way. But as its termination is, I believe, one very unusual, some account of it, however imperfect, should be placed on record.

Early on the morning of the 7th of June last, I visited Mrs. G., who supposed herself to be in the fourth month of her first pregnancy. I found she had been slightly ailing for a few days, that on the previous day she had been suffering some abdominal pain, and had repeatedly fainted, and that during the night pain had become constant and severe, with feelings of great tension and sickness. She had an anxious expression, and was unable to rest in any position. There was no fever. The abdomen was greatly distended, and so tender that the lightest pressure could not be borne. I could only ascertain that the distension was not of a tympanitic character. Fomentations

were ordered, and I gave her a full opiate. During the day she was a little easier, but still intolerant of pressure. Next morning the sickness, sleeplessness, and anxiety continued. There has been a slight sanguineous discharge from the vagina, but the os uteri had no tendency to open. The tenderness had sufficiently lessened to allow pressure to be made over the abdomen, and I now found that the whole cavity was occupied by a firm swelling, resembling the uterus at the full term of gestation.

On inquiry I found that neither the patient nor any of her friends had the least suspicion that she was affected with an internal tumour; and as it so happened I had attended her husband during an attack of typhoid fever so lately as the previous March and April, I was myself aware that at that time her appearance would not have led any one to suspect its existence. I came to the conclusion, therefore, that the swelling had been caused by internal hemorrhage. This view seemed confirmed by the circumstance that a few weeks previously she had fallen on the floor, coming down heavily on her buttocks. Although she did not feel the worse for the accident at the time, she had since then become disinclined for exertion, and had become subject to faintings. For a short time before I saw her, she had been noticed to appear languid and easily fatigued, and on coming up the stair she had to sit down for a time to recover herself; but these symptoms were ascribed to her pregnant condition. Her general state of health had previously been good. She had been able to act as her husband's nurse during the whole of the illness just mentioned. The swelling was neither so hard nor so nodulated as would be expected if the uterus were filled with clots; but, on the other hand, I could not suppose any other solid sort of tumour could have sprung up with the mushroom-like rapidity that apparently had occurred in the present case. I therefore determined to lose no time in emptying the uterus. As the os uteri was within easy reach, I was able to force the point of the finger within it and to get it dilated to a slight extent. I then ruptured the membranes, and gave repeated doses of ergot. The fetus was thrown off on the following day, and the placenta came away with ease immediately afterwards. I had made preparations for receiving a collection of clots, but the amount of hemorrhage was, if anything, less than in an ordinary case. The os uteri showed a disposition to close, and, so far as could be determined with the finger, the uterus seemed empty.

I had therefore to revise my diagnosis, and to entertain the notion that the swelling might be due to the presence of a tumour. As the patient was considerably exhausted, it was certain that in the meantime there was nothing further to do in the way of active interference. She passed a comparatively comfortable night, and in the morning the more urgent symptoms had abated. As the case, however, was an unusual one, and not without anxiety as to what the result might be, I requested Dr. Matthews Duncan to see her. He confirmed the view that a uterine tumour existed, but that any attempt to ascertain

its exact nature or attachment should be deferred till the patient had rallied.

Although I had been wrong in my diagnosis, the result seemed to show that the treatment was correct. The pain subsided, sleep returned, and the stomach could retain food ; the tumour also became lessened in bulk. At first it pressed upwards under the ribs, so that its boundary could not be defined, but after some days it subsided so far that its margin could be made out.

The patient kept in this condition, weak but not suffering, till the 24th of the month, when sickness and pain returned. On the following day these symptoms became urgent, the patient became very restless, and had an anxious, haggard expression. Some opium pills were prescribed, but they gave no relief. In the afternoon the pain amounted to agony, and the distress to absolute misery ; she had not a moment's peace. She had urgent thirst, but everything taken on the stomach was at once rejected. In this emergency, and as she had already got several grains of opium, I thought myself warranted in placing her under the influence of chloroform. The relief thus afforded seemed to be great, and when consciousness returned she pleaded with such piteous and persistent earnestness for more chloroform, that its use was continued. She sank on the evening of the 26th, having been kept under chloroform the greater part of the last thirty hours of her life.

A post-mortem examination, which was obtained with difficulty, and performed in most inconvenient circumstances, was kindly conducted by Dr. Harris, thirty-six hours after death. Dr. Matthews Duncan was also present.

On cutting into the peritoneal cavity, a quantity of fetid gas escaped with a loud report. When the abdomen was laid open the bowels superiorly were seen to be distended. The large omentum covering the tumour was in some parts almost black in colour, but did not present any obvious signs of inflammation, except slight soft adhesions to the upper part of the uterine tumour. On removing the omentum the bowels were seen to be distended with gas, and to have at many parts, but not uniformly, a red injected appearance. There was no fluid in the peritoneal cavity, nor was any lymph or pus discovered.

The lower part of the abdomen was filled by a nearly globular tumour, which, on being afterwards measured, was found to be twenty-four inches in circumference.* It was of a livid dark brown, almost black colour, and had the appearance of being decomposed. To ascertain its attachment it was carefully raised, and Dr. Duncan then noticed that the pedicle by which it was attached near the upper right angle of the uterus had become twisted. To examine this condition more minutely the fundus uteri was cut away, every

* Before the measurement was taken, however, the tumour had become comparatively flaccid from the draining away of serous fluid.

care being taken to preserve the relative position of the parts. The twisting of the pedicle could easily be seen. It was found to have been turned round $1\frac{1}{2}$ times, the direction being from left forwards to right. The pedicle itself was small, not so thick as the little finger, and appeared to be composed of vessels and peritoneum. When untwisted it was found to be potentially tubular, the separation of its walls forming a small cavity.

When the tumour was cut into it was found to be a sub-peritoneal fibroid. Its section had uniformly throughout a deep purplish-red flesh colour. From its cut surface air was seen to escape in numerous minute *bullæ*. The uterus itself appeared to be healthy.*

This case presents several points of interest, but unfortunately we have not sufficiently precise data to enable us to come to a definite conclusion about them. The first remarkable feature is the rapid development of the tumour. It appears something extraordinary that the abdomen could have become so largely filled with a hard swelling, without either the patient or any of her friends being aware that there was anything unusual about her. As she was rather small and sparely built, any increase of size could less easily escape notice : yet, as I have already said, I could myself testify that less than two months previous to the time I was sent for, her appearance was not such as to draw attention to her condition. The most probable explanation is, that after the twist on the pedicle had occurred, the circulation through the tumour would be interfered with, and that while the blood was still permitted to enter by the arterial vessels, its return by the veins was impeded. When the tumour was at its fullest, therefore, the bulk would to some extent depend on venous and serous engorgement. This view is confirmed by the circumstance, that before the patient's death the size of the tumour had become decidedly less.

The principal interest, however, is in the fact of strangulation and death taking place in the tumour. This is a termination not referred to in systematic works on diseases of the uterus. I am not aware indeed whether it has previously been observed. It is impossible to be certain as to when the twist occurred in the pedicle ; but as the patient was inclined to date the beginning of all her ailment from the fall previously mentioned, which was not more than three or four weeks before the time I was sent for, it is not improbable that torsion of the pedicle resulted from that accident. As we have seen, the first effect was to cause a rapid and great increase in the bulk of the tumour ; but afterwards, the circulation of blood being completely checked, loss of vitality would necessarily ensue. The great distress of the last two days of the patient's life may have been partly caused by septic poisoning ; but as there was no delirium, and as the temperature never rose to 100° , the local irritation of the putrefying

* I am indebted to Dr. Duncan for the use of the notes which he made at the post-mortem examination.

mass must have been the principal immediate cause of the intense pain.

In regard to the administration of chloroform, I rather think that the patient's life was prolonged some hours by this means ; but even if it may have had some effect in hastening her death, I would not hesitate in the same, or in like hopeless circumstance, to adopt the same mode of affording relief. If means to induce "euthanasia" with medicine are ever lawful, it must be where there is such a combination of overpowering agony with surely and speedily fatal conditions, as were found in the present case.

Meeting, March 11th, 1874.

*Note of a Case of Recurrent Peculiar Transverse Presentation,
apparently due to Malformation of the Uterus.*

By Dr. ANGUS MACDONALD, F.R.C.P.E., F.R.S.E., Lecturer on Midwifery
and the Diseases of Women and Children.

Mrs. Mathieson, a native of Inverness, aged thirty-three, was married there in the year 1860. Since that date, she has been ten times pregnant, and has now six children alive. While she resided in Inverness, she gave birth to three children : the first a boy, labour natural ; the second, twin boys, who lived only two days. In this case, the labour was also natural. She next had a miscarriage at about the fourth month.

About ten years ago, Mrs. Mathieson came to reside in Edinburgh, where she has continued to live since.

About five months subsequently to her arrival in this city, she gave birth to a healthy boy after an easy labour. In 1866, while standing on the stair leading to her house, she states that she was pushed aside by some men who were leaving a meeting, and falling down three steps was crushed into a corner of the passage. After getting into her own house she had the feeling that the movements of the child were different from what they were previously to the accident, but nothing specially happened, and she went on to the full time. At the time that this accident occurred, she was about the seventh month of pregnancy. Her labour was long, being of a week's duration, with very trifling pains. It turned out in the end to be a transverse presentation, and had ultimately to be terminated by the late Sir James Y. Simpson, by some form of embryulcia.

Eighteen months after this, she had a girl, which presented by the breech. In December, 1869, she was delivered of another female child, which presented transversely.

About a year and a half later, she was delivered of a boy by Dr. George Dickson. In this the presentation was a breech.

On the 13th of June, 1872, I was summoned by my then pupil, Mr. Green, to see her about two o'clock, A.M. I found her in labour,

the os uteri being just fully dilated, and the waters, as far as I recollect, unruptured.

On introducing my hand, however, I found that the child did not lie obliquely across the uterus as is usual in what are called cross births, with the head occupying one iliac fossa, and the breech more or less towards or above the opposite iliac fossa, but discovered that the child was rolled up somewhat like a ball, or, perhaps, more accurately, had its various parts disposed very much as we see a dog roll himself up when he goes to sleep. The whole of the vertebral column of the child was bent forward so as to assume nearly the shape of a semicircle, or, more accurately, of half an ellipse, with a small amount of eccentricity, and the head and neck, with the lower and upper extremities, filled in the other half of the ellipse. The vertex of the child's head lay thus in close relation with the lower end of its sacrum. The back of the child was towards the posterior wall of the uterus. The head, breech, and lower limbs were in contact with the anterior wall. The shoulders of the child were towards the right side of the mother. With very little difficulty I seized the right leg and effected delivery speedily and safely. The child was a female, and did well.

On the 3rd of February, 1874, my pupil, Mr. D. Menzies, sent for me to deliver this woman, whom he had been called in to attend, and had found in labour, with the child presenting transversely. On arriving, I found that the waters had escaped some hours before Mr. Menzies had arrived, and that, by the time I saw the patient, they had been at least three hours away. I put the patient under chloroform, and on examining into the state of affairs, I found matters precisely as I had found them in June, 1872. With no great difficulty I succeeded in hooking down the right leg, and turned with very little trouble. Indeed, I did not require more than the index and middle finger to be introduced into the uterus. Some time was lost in getting the occiput of the child forwards, as the body of the fetus was delivered with the abdomen anteriorly. Apparently in consequence of this delay, the child, though born alive, could not be brought to breathe well, and died shortly after birth. The mother made a good recovery.

Examination of the pelvis revealed everything normal, so far as regarded its bony framework. But on carefully examining the uterus on the last occasion, which I am sorry I omitted to do on the previous one, I noticed a very peculiar and extremely well-marked elongation of its transverse axis. After the separation and expulsion of the placenta, the uterus contracted firmly and uniformly; but instead of its shape being that of a ball or an elongated oval, it was flattened anteriorly, shortened longitudinally, and extremely elongated transversely. The uterus indeed assumed, when contracted, the shape of a fan. The transverse axis, so far as I could judge, was elongated 2 or $2\frac{1}{2}$ times the usual proportion, and the organ felt thin antero-posteriorly when seized between the finger and thumb. This

peculiar condition I pointed out then and there to Mr. Menzies ; and meeting, just as I was leaving the house, with my friend Dr. M'Gibbon, I took him back with me, and showed him the peculiar condition of the uterus. He fully confirmed the accuracy of the observation.

I had hoped to have been able to tell the Society whether this peculiar condition of the uterus was persistent in the unimpregnated organ ; but on calling yesterday with the view of making the necessary exploration, Mrs. Mathieson, with that fine sense of gratitude for relief from serious difficulty, which one occasionally, though I must confess rarely, meets with in these poor people, refused me all facilities to settle this point.

I have recorded this case because I believe this peculiarly great elongation of the transverse diameter of the impregnated uterus, in comparison with the longitudinal and antero-posterior ones of the organ, affords the most rational explanation of this very strange tendency to abnormal presentation.

I am exceedingly sorry that I did not carefully examine the uterus on my first attendance, as I cannot assert positively that such was its condition then. I think, however, that the fact that I found the child's position the same, and its parts disposed in a similar manner in this as on that occasion, affords a strong presumption that the condition then existed.

It seems to me that, ever after the injury received by this woman in the stair, some peculiar change of shape had been impressed upon the organ. At all events, her obstetrical history, after this accident, is very curious indeed. Since then she has had six labours, in which the fetus presented transversely in four cases, and in the two remaining cases the breech came first. Now I hold that, normally, the fetus takes the position which gravity gives it, and can do nothing else so long as it is wholly or nearly submerged in the amniotic fluid ; the reason being that, if it were kept out of the position which gravity would make it assume, it must be sustained in that position by the action of a constant force, for we know that a solid body floating in a fluid can only rest when the centre of gravity of the solid and the centre of gravity of the fluid displaced by the solid, are in the same perpendicular line. But we have no other constant force acting upon the fetus. I am therefore obliged to throw overboard alike the exceedingly ingenious theory of Dubois, in reference to small volitions of the fetus, and the expansion and advance made upon it by Sir James Y. Simpson, who, in the light of a more advanced physiology, ascribed the position of the fetus in utero to reflex action of the fetus. I consider that neither of them could maintain the fetus in any position as against gravity without perpetual action, and this would wear out the nervous and muscular forces of the fetus. And, again, by the law of parsimony they are excluded, because gravitation gives us a force, which is always present and perfectly able to account for and to maintain the position of the fetus in utero, and why then assume another ?

But, while allowing all this for the normal condition of a healthy pregnancy, we must grant that all children are not born head foremost, and that pathological conditions and various accidents lead to malpresentation. It has been lately observed, chiefly by our German brethren, as a result of frequent examination during the latter weeks of pregnancy, that there is even then a much greater frequency of change of position of the fetus than we had been wont to believe. It has always been known, that in the earlier six or seven months, the fetus moves about with great freedom, and in all odd sorts of ways. It was not, however, believed, till within a few years back, that the fetus retains till the very end of the period of utero-gestation a considerable amount of its old habit of changing its position, and gets ultimately fixed only when the uterine contractions become established. This tendency to change of presentation in the latter months, even although it is so strongly insisted upon by Schultze, Schroeder, and others, may as yet be held as not fully established. It is made out so far, however, as to explain that a great number of irregular presentations are due to the uterus commencing to contract upon a child which is not favourably placed at the moment for assuming the position with the vertex at the internal os.

Thus suppose, at the commencement of labour, the fetus lies, as it usually does, with its longitudinal axis more or less obliquely to the longitudinal axis of the uterus. If the contractions fail to establish a coincidence between the longitudinal axis of the uterus and of the fetus; a more or less transverse position is the result, and thus we get one or other of the many forms of cross-birth.

Such contraction, however, fails completely to account for such a disposition of the child's parts, as I found on the two occasions mentioned. In those cases there was no obliquity whatever. The fetus coiled upon itself was so disposed that its largest diameter was distinctly and absolutely at right angles to the longitudinal axis of the uterus. This could not have been of recent origin. I am therefore driven to the conviction that this peculiar presentation was due to the malformation of the uterus, which did not permit the fetus to rest or develop, except with its long axis in that of the long—that is, in this case, the transverse—axis of the uterus.

I am glad to be able to quote the great name of Simpson in support of such a view, although I cannot accept his explanation of how such abnormality acts. In his paper upon the "Attitude and Position of the Fetus in Utero," vol. ii. of Sir James Y. Simpson's *Obstetrical Works*, edited by Priestly and Storrar, Sir James, in referring to malformations of the uterus as a cause of malpresentations, quotes a case which is almost identical with mine, only that it was examined with care before the labour was terminated. It runs as follows:—

"A patient in her first two labours had the arm of the child presenting. In her third labour, the same presentation recurred. On examining the uterus before delivery, Dr. Lecluyse found it of an abnormal configuration. It was short and depressed in its vertical

direction, but large and expanded towards either side. It was ellipsoid instead of pyramidal in shape, and had thus gained in lateral width what it had lost in perpendicular height. Its long axis was from side to side. . . . After the uterus was emptied in this case, the organ still presented the same deformity."

A point of this case, well worthy of my calling the attention of the Society to, is, that in the last case the fetus did not rotate when the breech became engaged in the pelvis, as it usually does. The abdominal aspect of the child continued forwards and to the left throughout, leaving the nucha of the fetus towards the right and posteriorly, and the chin towards the left and anteriorly, when the head engaged at the brim. The delay and difficulty in getting the occiput forwards under the symphysis at the outlet, as also the fact that the child had been exposed to pressure for several hours before medical aid was secured for the patient, sufficiently explain the death of the child.

As connected with this irregularity, and as bearing upon turning in general, especially in so far as regards the selection of the proper leg, I may draw the attention of the Society to the important observations lately published on this subject by Fritsch, in the *Archiv für Gynaekologie*, Band iv. S. 483.

The drift of these is, that, provided you turn properly, you need not care whether at the termination of the act the child is situated with its back forwards or backwards. If let alone, the labour will most commonly terminate by the back rotating forwards, during the passage of the body of the child as a result of the natural mechanism in the small pelvis. This, then, according to one author, does away with all those vexatious rules which one sometimes attempts to learn, as regards the seizure of the proper foot in turning. He recommends, very rationally, to seize the nearest foot in all cases, and turn as carefully as possible, leaving all attempts to bring the child's dorsum forwards to the mechanism of delivery. He likewise explains the prevalence of mistaken notions on this subject as the result of obstetricians confounding the position of the fetus after turning, with its position when the body is being expelled through the small pelvis. Finding the back of the child far most commonly forwards, in the latter they explained a great deal that was the result of the natural mechanism of the presentation to the good effects of the particular limb seized by them in turning according to their rules. Had they taken the trouble to examine accurately, as he did, how the child lay immediately after they turned, they would have been less troublesome as to rules of procedure. To the truth of his opinions, I think most careful obstetricians of experience will subscribe.

OBSTETRICAL SOCIETY OF DUBLIN.

*Meeting, June 13th, 1874.*LOMBE ATTHILL, M.D., *Vice-President, in the Chair.**Remarks on Incontinence of Urine in Children.*

By HENRY KENNEDY, A.B., M.B., &c.

In the following paper I would make a few remarks on the subject of incontinence of urine in children. The affection is not a serious one, but it is of sufficient consequence to render it very often a most distressing one, and it may be said to be always very difficult to cure. I do not know that I have anything new on the matter to offer to the meeting, but what I have to say will, I hope, elicit a discussion, and so collect the experience of many on this subject.

Before speaking of the immediate matter before us, I would just remind you for a moment of the marked differences—I might almost call them contrasts—which exist amongst infants at and after birth. Witness their size and weight, the growth and colour of the hair, and the appearance of the teeth. The varieties in each and all these points need not be dwelt on. Nor are they confined to what might be called externals. The varieties extend to the internal functions as well. Thus you may observe marked differences as to the susceptibility of the stomach and bowels; or when the infant comes to get food, such as bread, you may observe differences, not so much in the quantity taken as in the very mode of swallowing it. Whilst in most the act comes, as it were, by a kind of instinct, in others care is required, else there will be a risk of choking them; and even when they grow up so as to be able to feed themselves, every one must have observed that the act of swallowing is not performed in the same perfect way by all. Some require a mouthful of drink frequently; whilst in others the tendency to a bit going the wrong way, as it is expressed, is out of all proportion more frequent than with other children. What I wish to exemplify, too, may be observed on other points, more particularly as the child grows up. Thus some are essentially awkward in all their ways and actions, and no education will cure them. Some are awkward, if I may so express it, in their powers of speech, and will continue to speak thick, years after others can speak perfectly. I am sure it has been observed by others, as by myself, that girls speak earlier and more perfectly than boys; and in connexion with this subject it is well ascertained that stammering is much more common amongst males than females. But it may be asked here, what have these remarks to say to the subject of my paper? Much, as I conceive; for they prove that the varied functions of our frames are liable—in childhood, at least—to certain derangements which mar the harmony that would otherwise exist; and there are few who do not exhibit, at this period of life,

some one or more of those deviations to which I have alluded. Now these diversities in the mode of performance of natural functions may be either of a temporary or a more permanent character, and it is in this class I would place the affection to which I wish more particularly to ask your attention at present.

Incontinence of urine clearly belongs to one of those deviations from actual health of which I have been speaking. What the exact cause is it would be hard to determine, but it would seem to be a want of nervous influence in the sphincter of the bladder; or probably it might be better expressed by saying that the proper balance of power between the retaining and expulsive powers was lost for the time. I say for the time, as in the great majority of instances the affection is intermitting, or, if not actually intermitting, is at least worse at one period than another. This fact proves, at any rate, that whatever the cause be it cannot be due to any abiding disease. If it were, it would be very hard to understand why it should intermit, as it certainly does. That the affection is not due to what we understand as a delicate constitution is, I think, pretty certain. I have often seen the affection in robust children—indeed, I am not sure if they be not the majority. I think, however, the most of them had a marked mobility—if I may so express it—of the nervous system. Neither, in connexion with this part of the subject, must we forget what is to be met with in the adult, where considerable diversity in the function of the bladder is known to exist. You must all be familiar with these varieties, and I only allude to them here to show that if they exist in the adult, where all the functions may be supposed to have reached their maturity, they may much more readily prevail in infancy and childhood.

In connexion with this infirmity of the bladder, it is worth noting how rarely the bowel is implicated. Yet this does sometimes occur, intermittingly, as it were; but I have never seen it to the same degree as occurs with the bladder, nor have I ever been consulted about it. The parents have looked upon it as a casualty; yet to myself it has appeared exactly analogous to what occurs in the bladder. Need I say I am not speaking of what often occurs in the progress of the fevers of children, but of what takes place when the child is, to all appearance at least, in good health.

For so far the remarks made have had one object in view, which was to show that incontinence of urine in children is but one of the ways in which infirmity of the frame declares itself in childhood. What this weakness arises from is hard to make out, but it seems likely to be some cause in the nervous system itself. We know that when a child is born with any defect, such as a weak and atrophied side of the body, this is due to an arrest of development of a part of the brain; and so I take it to be—though in a greatly less degree—with the affection now under consideration. That there is no real disease may be taken for granted, else recovery would never take place, which would be contrary to all our experience. The affection

seems to myself to be as close to real disease as it could be, consistent with perfect recovery. This would of course be the worst form of the affection, any others being of a lighter character and easier recovered from. Considerations of the kind advanced are, I believe, useful, but I shall not dwell on them longer at present.

On the affection itself I need not keep you one moment. It requires no description. The child wets the bed once, twice, or, as I have known, three times during the night. Nor is the infirmity confined to the night, as possibly many suppose. I have known it occur in the daytime. The very last case I saw was of this kind; but unfortunately I lost sight of it, having seen it only twice. The boy was eight years of age, and small for his years. The affection had not been of long duration. On the closest inquiry I failed to make out any such specific cause as would account for it. Cases of this kind are rare. As to the sex, boys are, I believe, more frequently affected than girls; but the latter are by no means free of it. I have both seen and known of different instances in girls. It is unnecessary to state that the duration of the complaint is most uncertain. In severe cases it has continued till the change from boyhood to manhood took place, and then only has it ceased. Probably most whom I address have known of instances where boys had to be taken from school on account of it. In a very obstinate case in a female, of which I knew, the infirmity continued up to womanhood, and ceased only when the patient married. I confess it appeared to me at the time a bold experiment; but marry she would, and the result proved she was right. On the whole, and in the worst cases, both manhood and womanhood may be looked on as a barrier beyond which period the infirmity will cease, but it must be allowed to be a grievous calamity when it continues as long as this. In connexion with the duration of this state, we must not forget a point in its natural history to which I have before adverted—I mean the intermitting character of the complaint. I presume most present are aware of the fact that the affection will often cease, and very suddenly, but only to recur again after an interval. On other occasions, again, its intensity will lessen, if I may speak of it, without quite ceasing; and then it will return to its former state. This kind of intermission it is certainly very hard to explain; but it is prudent not to forget the possibility of its occurrence, more particularly when we come to consider the treatment, which is the next point to which I would ask your attention.

The treatment of this affection may be divided into two kinds—the mechanical and the medical. Amongst the former of these must be noticed what was suggested by Sir D. Corrigan a few years back, which consisted in the application of strong collodion to the orifice of the prepuce, and so preventing the escape of the urine for the time. This idea must, I fear, be given up; for it is more than probable the urine would not be retained in the bladder, but would make its way into the prepuce—that is, supposing the orifice was so

glued as to keep it there. And that this is not mere speculation I may mention the following. I had taken a boy of ten years of age, who laboured under the infirmity, to the late Sir Philip Crampton for his advice. In the course of our conversation the idea of tying the prepuce was spoken of, but to this Sir Philip objected, inasmuch as he had known of a case in which this plan had been adopted, and the result was that the prepuce was literally turned into a bladder—an infirmity from which the sufferer was not freed as long as Sir Philip knew him. A more feasible plan with boys—and one which, indeed, is very old, having been proposed and acted on long since—is the application of a piece of bougie to the under surface of the penis, and keeping it there by means of sticking plaster. I tried it myself in the very case spoken of above, but I found very much more difficulty than might at first sight appear. It had of course to be used at night, and taken off in a few hours, and it entailed close watching. Besides, too, it gave rise to some pain; though this was very probably due to its being applied too tight. Still the plan is one of which, I think, we should not lose sight. I can easily conceive a case in which, all other measures failing, we would be justified in trying this one. Nor would the difficulties be as great now as they formerly were; for we have got vulcanized india-rubber to deal with, and it seems clear to me that this substance, probably in the form of a ring, would be just to our purpose. The pressure, it is obvious, should be at the root of the penis, and it should not be undertaken except under medical supervision. The object is to break the wrong habit of the system; and if this be done for three or four nights, there is a strong probability that the proper function of the bladder will be restored, and the infirmity cured. It need scarcely be added that it is only to boys these remarks apply, and it is when other measures have failed that this one should be tried. A second means which has been proposed for treating the affection, and which would come under the head of mechanical, is the position of the patient whilst in bed. It has been said that if they be kept on their side there is not that tendency to empty the bladder that exists when lying on their back; and this has been explained by supposing that in the latter the urine irritates the trigone of the bladder, and so causes the organ to empty itself. Before taking up this idea we ought to be sure that the statement is true. To myself it seems very unlikely, and I know in one instance it was not the case, as the patient, a boy, wet the bed, no matter in what position he lay. Besides, it is hard to understand how any quantity of urine can be in the bladder without coming in contact with the trigone.

It now remains to make a few remarks on what I have called the medical treatment of the affection, and this divides itself into general and special measures. Amongst the former will be placed the regulation of the quantity of fluid taken, as well as the time of the day it is used. There can be no doubt that if any over-quantity be taken towards evening, it must greatly increase the tendency to the

complaint. Hence the necessity for regulating the quantity. Of the fluids used, I think tea has an injurious effect, and should be avoided. Speaking of the quantity of fluid to be used reminds me of a plan which, when it can be carried out, is always of use; nor do I recollect seeing it noticed in the books treating of the subject—I mean teaching the patient, during the daytime, to retain the urine as long as is possible. I have no doubt this is useful, though, owing to the age of some of the patients, it is not always available. You will observe it is the very opposite of a plan which is in very general use—I mean taking up the patient once or oftener during the night. By this means the unpleasant effects of the infirmity may certainly be averted, but otherwise I look on the proceeding as decidedly objectionable. It educates the bladder to empty itself the more frequently, and this is precisely what we do not want.

Amongst the medical means employed for the cure of the affection, blisters must be mentioned. There can be no doubt that, applied to the sacrum, they have been sometimes successful; and when they do succeed it is at once they do so. In one instance where I gave this plan a trial it did not succeed. This was the case of a robust boy of six years of age. The mother did not wish a second blister to be put on. In another instance, that of a girl of seven years of age, the plan was more successful, as for a period of four months the disease was completely stopped, but it then recurred, though at the time I lost sight of the case; for the child's mother was advised to leave the infirmity to itself, being told that when the patient became a woman nature would right itself. It has turned out otherwise, however; and, strange to say, it was this past week only that the mother came to me to tell me that, though menstruation has been established, the infirmity has not ceased. The girl is now fifteen years of age. On the whole, the blistering plan is one not to be forgotten; for it is clear that cases will occur where we will be driven to try every resource, and this one amongst the rest. West, in speaking of this plan, says the blisters should be applied again and again. Though I cannot speak against this way of using them from experience, I must say it seems to me if they do not succeed at first they are not likely to do so by repetition.

In any of the works in which this infirmity is spoken of it seems to be taken for granted that tonic medicines are to be used as a matter of course; and the tincture of perchloride of iron has been specially praised. I must say that they have not answered my expectations, and I doubt whether others have found them more beneficial. Some form of the cold douche, however, is a valuable agent; and if the disease be checked, even for a time, this measure will most probably prevent a relapse, which we know is so likely to occur.

Of specific medicines used for this infirmity I need only speak of two. The first is the hydrate of chloral, which has been recommended strongly by some. It has only yet been used by a few, and whether it will in the end prove a useful remedy remains to be seen.

In the case alluded to before, where the boy suffered in the day as well as the night, I tried chloral. The patient was brought to the Whitworth Hospital, Drumcondra, but, unfortunately, I lost sight of him after the first week, and so I have no experience to offer on the point. It has been stated, however, that cases have been cured by this medicine ; and it is therefore worthy of being kept in mind.

The last medicine of which I have to speak here is belladonna, and, with our present knowledge, it is I believe the most effectual means we possess. I need scarcely say that this is a potent drug, and has been proved to be a very valuable remedial agent in some obstinate diseases, such as hooping cough, chorea, &c. ; and Trousseau speaks favourably of it in epilepsy. There is one very strange feature about it, as regards children, and that is the little susceptibility they show to its action. It may be considered as established that they bear it very much better than adults ; and, when we come to use it, this point must not be forgotten. My own experience bears out this most completely. I have rarely seen the pupils at all affected, and when they were the state passed away very quickly. I may add that, by gradually increasing the dose, I have given very large doses for hooping cough, and the same remark applies to the disease now under consideration, but the number of the latter has not been at all so numerous as the former. It may be looked on as proved that, with children, the functions, especially those of the kidneys, go on so actively that a poison like belladonna passes away almost as rapidly as it is taken. This reminds one of the analogous fact, which occurs with calomel ; for we know that it is scarcely possible to salivate a child.

My own experience of the use of belladonna in incontinence of urine reaches to two cases, which came under my care during the past year. The first was a boy of three and a half years of age, admitted into the Whitworth Hospital, Drumcondra, under the care of my friend Surgeon Elliot, for one of the forms of club foot. I found he laboured also under incontinence of urine, and wet his bed every night. He was a fat, healthy-looking boy, and his appetite good. The urine was not over-acid. He was put on belladonna, in the form of tincture, one drachm to four ounces of water. The dose was a drachm three times a day, and it was increased every third day by one-half. No directions were given about the fluid taken. By the third week the nurse reported the boy better. Some nights passed without the bed being wet, and in five weeks the improvement was quite marked, and it went on till he got or seemed to get quite well. At the end of six weeks, however, there were signs of a relapse, and the belladonna was resumed, but in double the doses which he got at first, having now a knowledge of what he would bear. The disease again yielded, and much sooner than before, and this one case may be looked on as equivalent to two, so marked were the effects of the drug. The boy remains well at present, three months having elapsed since the infirmity ceased.

The second case was that of a boy of ten years of age. Though healthy-looking he was thin and tall for his years, and, about one year before I saw him for the incontinence, had had a severe attack of chorea, and with it a strong beat of the heart, and a well-marked soufflet occupying the first sound, and to be heard not only at the apex, but strongly marked between the left scapula and the spine. This boy had the infirmity for more than five years. But it was one of those cases to which allusion has been already made—that is, he was much worse at one period than another. His mother had been most assiduous in taking him up at night, but it had not cured the complaint. I advised his getting belladonna in increasing doses, and the tincture was the preparation used. At the end of three weeks improvement was reported, and a week now elapsed without wetting the bed. Unfortunately, circumstances then occurred to interrupt the giving of the medicine, and the ground which had been gained was lost. After an interval the belladonna was resumed, and with precisely the same effect as at first—that is, intervals of a week, or even more, elapsed without wetting the bed. Unfortunately, some illness now broke out in the family, and again interrupted the use of the medicine, and it has not been resumed since. It is, however, particularly worthy of note, that the boy has not fallen back, as he did on the former occasion; and, though the infirmity is far from being cured, the parents consider him very much better than before the belladonna was given. There can be little doubt, I think, that a longer use of the medicine would, most probably, make a complete cure of this case, and I hope to try it again when a proper opportunity offers.

Such are the remarks I have to offer on the subject before us. I have not thought it necessary to allude to some of the supposed causes of the complaint, mentioned by West and others, such as over-acidity of the urine or worms. My reason was that these causes have not come under my notice. Worms are a much more common complaint than incontinence of urine; yet I have not seen any instance where the two were combined; and again the urine has not been over-acid. Children are often sufferers from dysuria and frequency in passing water; but, as far as I have seen, this is a very different affection from the infirmity of which I have been speaking.

In conclusion, I would repeat the four points which, with our present knowledge, seem to me to hold out the best prospect of curing this complaint:—

1. The training the child to retain its water in the daytime, as long as possible.
2. The use of the cold douche.
3. A moderate use of fluids towards night, and a total abstinence from tea.
4. The internal use of belladonna, given in increasing doses, till its specific effects are produced.

Dr. DARBY agreed with Dr. Kennedy that incontinence of urine

mostly affected boys, and that it generally terminated or was cured about the age of puberty. He was unable to throw any light on the pathology of the disease; but he knew of a case where it had been transmitted through three generations—the grandfather, father, and son. The son was a boy about twelve years of age, and was suffering under this distressing infirmity when Dr. Darby saw him. The father told him that he himself had been similarly affected until he reached the age of fifteen, and that his father had told him that he also suffered from incontinence of urine until he had attained the same age. He knew another case in which it was also hereditary. At the time Sir D. Corrigan read his paper on the subject he (Dr. Darby) made a few remarks, and he was then inclined to attribute the infirmity to the want of care on the part of nurses, and giving the child a bad habit. Since then he had made use of the treatment recommended by Sir D. Corrigan, and it was perfectly successful in the six cases in which he tried it; the affection was cured by that means in the course of a week in one case, in a month in another, and in a few months in some. He accounted for it in this way. The sealing up of the prepuce with collodion imposed an impediment to the child passing water unconsciously; he got uneasy and disturbed and woke up, whereupon he made water properly. In one case two applications of the collodion were sufficient to effect a cure, and the child had had no return of the complaint since, and that was six or seven months ago. With a very young child, of course, it might not have the same effect. He had not seen many females with this affection, but he believed it continued in females to a much later period of life than with boys, and in those cases which were hard to cure, he believed blistering was the best mode of treatment. Dr. Kennedy did not allude to treatment by tincture of cantharides. He remembered a case of whooping cough where the parents of the child, instead of going at first to a doctor, consulted a Lady Bountiful, in their neighbourhood, who had a panacea for the disease, consisting of carbonate of potash, cochineal, and large doses of tincture of cantharides. She pressed the cantharides till it produced strangury, and the result was that he was cured of incontinence of urine as well as the whooping cough.

Dr. C. F. MOORE doubted the propriety of giving belladonna to children in the large doses mentioned by Dr. Kennedy. He knew a case where a lady gave belladonna, for a length of time, to a child in the hope of keeping away scarlatina, the result being complete loss of sight, which was never restored.

Dr. DARBY also believed that belladonna was not so harmless as Dr. Kennedy appeared to think. He knew of a case in which it was given as a prophylactic against scarlatina, with the result of causing most intractable indigestion.

Dr. CHURCHILL said:—Incontinence of urine is a very obstinate disease, or habit at any rate. In some cases I think it arises or is kept up by an acid condition of the urine, and I have seen such

cases benefited by the administration of alkalies. These cases are the most curable. I have seen it benefited by belladonna, though not in such large doses as Dr. Kennedy recommends. I have also seen it benefited by cold douches at night. I believe the best treatment is watchfulness. I remember asking a wise old man, Dr. Charles Johnson, how he cured cases of this kind, and he said the only way he succeeded was in employing an experienced nurse-tender, and having the child carefully watched all night. There is something very curious in this affection; it may prevail something like an epidemic in a large establishment of boys. I remember it happened (I am not sure, however, that it was not tricks) when Smithfield Penitentiary was occupied by boys. One or two of the boys had the habit, and they were punished for it. Suddenly every boy in the establishment wet his bed. The physician had an accurate knowledge of human nature, and one morning he brought in with him from his country residence a bunch of nettles, and ordered that every boy who wet his bed should be well whipped with the nettles. One or two, I believe, were so punished, but at all events the epidemic was completely stopped. There is, as Dr. Kennedy says, a marvellous difference between those cases occurring in the day and in the night. A boy can always empty his bladder in the daytime, and will do so, if reasonably well taught. In the night, of course, he is asleep. I took some trouble to find out what time of the night it was in which the incontinence most frequently occurred; whether, when the boy was sound asleep, or in that half state which precedes waking; and in several instances I found it occurred when he was in a deep sleep, but in the majority of cases it occurred shortly before waking. I am not quite sure that it is not connected with dreams of passing water, the child really having a sort of dim consciousness that he was passing it properly. It is probable that some of these cases may arise from want of proper tone of the bladder, and such cases might be benefited by strychnine. I have seen several cases of incontinence of urine in girls. I know one who is now twenty years of age.

Dr. KIDD said:—I think one of the methods of treatment Dr. Kennedy alluded to is the most efficacious and rational. I have long practised it. When cases of incontinence come before me, I impress upon the parents and upon the patients themselves, when of an age to understand it, the importance of educating the bladder during the daytime to retain the water. Teach the patients to retain the water as long during the day as possible; and in that way you will accustom the bladder to the irritation of the urine, and, in many cases, I believe, overcome the irritability of the organ which causes the incontinence. On another point referred to by Dr. Kennedy, I do not so fully agree with him, and that is the abstinence from fluids. I think if you make the children abstain from fluids you cause the urine to become more concentrated and more irritating, and you rather increase the tendency to wet the bed. There is another point

which should not be overlooked—namely, that sometimes this incontinence of urine is a symptom of epilepsy. I believe that in many cases of epilepsy where the fits occur only in the night, their occurrence is only known by the bed being wet. In many cases I have had my attention directed to that form of epilepsy in which the fits only occur during sleep, by finding that the bed has been wet, and I think that in considering this question, the possible existence of epilepsy is a point that deserves to be borne in mind. Another important matter with regard to the treatment, is what is the best kind of bed for the patient. Early in my life I had occasion to watch very closely a case of this kind. The patient was the son of a medical man, and was afterwards a great athlete and the winner of numerous prizes at athletic sports. Up to the age of puberty he was greatly distressed by incontinence of urine. His father tried a great many devices for protecting the bed and making the affliction less disagreeable, and among the rest he tried india-rubber sheeting. I believe that of all the devices that is the worst: the child lies all night in a pool of urine, and you have the skin irritated and the child constantly getting cold. With some of the patients at Lucan we have tried india-rubber sheeting with tubes leading from an opening in the centre into a pan underneath the bed. That is better than the plain sheeting; but as far as my experience goes, the best plan is to put the patient to lie on a bed of good wheaten straw; the water trickles through it at once, and the patient is saved a great deal of discomfort. Within the last few days I have learned that at the asylum in Sligo, where there are many dirty patients in the habit of wetting their beds, they use a canvas bed—simply a stretcher made of some peculiar canvas, manufactured specially for an asylum near Liverpool; this is stretched over two wooden supports, and the patients are put to lie thereon, with two blankets under them folded in the way described by Sir Dominic Corrigan—two blankets doubled and meeting at the hips, so that the upper one is without the range of the wet, and the lower one is easily removed. I am told that they have found that better than straw at the Sligo asylum, but my own experience leads me to think that wheaten straw is the best. There is one other point which I should not omit to notice, and that is the frequent association of this condition with ascarides in the rectum. Some of these cases I have seen benefited by the injection of a solution of common salt into the rectum, which removes the ascarides and allays the irritation. I think the tincture of muriate of iron deserves more credit than it has got from Dr. Kennedy, as a remedy for this affection.

The VICE-PRESIDENT (Dr. ATTHILL) said that as the causes of incontinence were numerous the remedies must be numerous also. Dr. Churchill had alluded to punishment as a remedy sometimes adopted in these cases. They all were aware that instances occurred of children being punished for incontinence of urine; nothing could be more cruel or injurious than such a course. Very few

indeed wet their beds intentionally. As to the time at which the urine was voided, no doubt it sometimes occurred during the act of waking, and sometimes in the most profound sleep. This doubtless varied with the causes the habit depended on. With respect to this infirmity in girls, he had seen that day an exceedingly handsome girl, of eighteen, who was afflicted with incontinence of urine at night. She had been treated by some of the best physicians in this city without a permanent benefit. A remarkable feature of her case was, that when on a visit, she never wets the bed. If she goes to an hotel, or if she is on a visit to friends, five or six nights, at least, will elapse before it occurs, and then the infirmity returns. The explanation of this probably was that her sleep was not so sound as when she was in her own bed, or had got accustomed to the bed in her friend's house. He saw this girl, for the first time, last year, and her condition now was considerably improved, inasmuch as she would pass eight or ten days without wetting the bed, but she always did so at the approach of the menstrual period, and, probably, Dr. Kennedy's cure (marriage) would cure her. He thought this was an instance in which the urine was probably voided while in a state of profound sleep. With respect to Sir Dominic Corrigan's method, he had tried it in several cases, but had not had the amount of success which attended Dr. Darby's. He (the Vice-President) would not say, however, that that was always fairly tried. To apply collodion properly the prepuce must be well dried and the collodion coated on carefully and thoroughly, and not one woman in twenty would do this efficiently. Therefore, he was not prepared to say that collodion would prove a failure if applied by one who would take the proper precautions. A short time ago he saw a boy who had incontinence of urine, and a remarkable feature in the case was that when he was taken up at night, if the weather was in the least degree cold, they could not get him to pass any water at all. He would then be put back into bed and in fifteen minutes he would be in a flood. That case gave him an idea that possibly ice applied to the spine might sometimes prove of use; he had not yet put it into practice, but would do so whenever an opportunity arose. This idea was supported by the observations of Dr. Churchill, that he had seen cold bathing at night do good. In cases where cold had the effect of checking the tendency of the bladder to empty itself, he thought cold applied, in the form of ice bags, to the spine in the course of the night, would have the effect of prolonging the interval, if not of entirely checking the involuntary evacuation of the urine. Dr. Kidd had forestalled him in his observations about the value of straw beds for patients thus afflicted. He had had experience of its benefits and fully concurred in Dr. Kidd's recommendation.

Dr. T. MORE MADDEN said that he had published in the present number of the *Irish Hospital Gazette* some cases of this disease. In the Children's Hospital with which he was connected a good many cases of the kind occurred lately. They were divisible into two

classes, those which were preventable and those which could not be prevented. The former cases were the most numerous. In them it was not a disease but the result of carelessness on the part of the nurses and the children themselves, and could be cured by simple attention to cleanliness. He remembered hearing Dr. Darby say in the discussion on Sir Dominic Corrigan's paper, that he could prevent the wetting of the bed, in a great number of cases, by punishing the nurses in whose hands the patients were placed, and that was Dr. Madden's experience also. Unfortunately there was a class of cases which went beyond this, and very few persons knew the extent to which this most unpleasant affection prevailed. He had known many cases of its occurrence in adults, and at present he knew two young men, grown up to adult life, still continuing this habit, and rendering their lives perfectly miserable. He agreed with Dr. Kennedy that blistering the sacrum was of advantage, but not for the reason he had assigned. Dr. Kennedy thought it was of no great use to prevent the patient lying on his back; but he (Dr. Madden) thought that a blister on the sacrum would render it uncomfortable to the patient to lie on his back, and in that way alone would do much good. He disapproved of the mechanical treatment which had been suggested. As to the medical treatment, there were two remedies which he had found useful—tincture of perchloride of iron and tincture of belladonna; and though they produced different effects when given separately, he found they acted very well in combination, and he had tried that combination in the Children's Hospital with much advantage. If they blistered the child's sacrum to prevent it lying on the back, put it on tincture of iron and belladonna, and gave no salt in its food, they would have very few cases of incontinence of urine.

Mr. F. T. PORTER asked Dr. Kennedy if he had examined the state of the urine in any of the cases which came under his notice. In a very bad case of a boy between eight and ten years of age, he (Mr. Porter) detected phosphates in the urine. He found that the child's brain had been overworked, and on remedying this and giving him tonics and improving his general health the habit disappeared.

Dr. SIBTHORPE had a girl of eight years of age who suffered from this infirmity under his care some time ago. The treatment adopted was to give her no drink from the time she got her dinner—not even tea—and the last thing she did at night before going to bed was to pass water. Tinctura lyttæ was administered, and she got quite well.

Dr. KENNEDY, in reply, said he had never heard of the effects of belladonna alluded to by Drs. Moore or Darby, and had seen none of the disagreeable consequences spoken of by Dr. Darby in any of the cases in which he had administered the drug. He was glad to hear that Dr. Darby had had such successful experience of the collodion process, and hoped he would publish the particulars of the six cases in which he had employed that method. With reference to the state of the urine, he had never tested it further than as regarded acidity,

and he had never found any remarkable amount of acidity existing. He should say that in such a stage of life phosphates would be very rarely found to exist. He was aware of the fact alluded to by Dr. Kidd that epileptic patients frequently passed their urine in bed, and that it was often the only proof that they had got a fit in the night. The point was one that ought not to be overlooked, and the greatest watchfulness should be exercised in the case of a child suffering under this infirmity. Tonics in his hands had failed to effect a cure, although the health of the children had improved very much under cod-liver oil and tincture of iron.

ROYAL SOCIETY OF LONDON.

The Structure of the Mucous Membrane of the Uterus and its Periodical Changes.

By JOHN WILLIAMS, M.D. Lond., Assistant Obstetric Physician to University College Hospital.

The paper consists of observations made on the uteri of nine women who had died in different stages of the monthly period.

In two of the uteri the menstrual flow had almost ceased, and the mucous membrane was wanting in the bodies of the organs. The muscular fibre-cells were more or less exposed in the cavity, and the meshes formed by their bundles contained glands and groups of round cells.

In one uterus menstruation had ceased three days before death, and the muscular fibres were not exposed in the cavity of the organ, but imposed upon them was a layer of tissue composed of fusiform and round cells. This tissue contained glands. The muscular tissue near the internal orifice was devoid of glands, but nearer the fundus it contained numerous glands.

In one uterus, in which the catamenial flow had ceased probably about a fortnight before death, the layer of superficial tissue was thicker than in the last; and near the internal orifice there was a marked and abrupt distinction between it and the subjacent muscular tissue.

In one uterus the flow had ceased three weeks before death, and the superficial layer was still thicker; and the distinction between it and the subjacent muscular layer was well marked, except at the fundus. The uterine glands were tubular, and arranged in some parts obliquely, in others perpendicularly to the surface. They were lined by columnar ciliated epithelium.

In two uteri menstruation was imminent, but the flow had not begun. In these the mucous membrane of the body of the uterus was fully developed, and had begun to undergo fatty degeneration. There was a marked distinction between it and the muscular tissue throughout the uterine cavity: it was highly congested.

In one uterus the menstrual flow had taken place for one day, and in another for two or three days before death. In these there was extravasation of blood into the mucous membrane, and the latter had in part been disintegrated and removed.

Menstruation appears essentially to consist, not in a congestion or a species of erection, but in growth and rapid decay of the mucous membrane. The menstrual discharge consists chiefly of blood and of the débris of the mucous membrane of the body of the uterus. The source of the hemorrhage is the vessels of the body of the uterus. The mucous membrane having undergone fatty degeneration, blood becomes extravasated into its substance; then the membrane undergoes rapid disintegration, and is entirely carried away with the menstrual discharge. A new mucous membrane is then developed by proliferation of the inner layer of the uterine wall, the muscular tissue producing fusiform cells, and the groups of round cells enclosed in the meshes of the muscular bundles producing the columnar epithelium of the glands.

Obstetric Summary.

Contribution to the History of Puerperal Tetanus.

Dr. Blachez, in the *Gazette Hebdomadaire*, says:—The disease under consideration is not that marked by muscular contractions observed in puerperal women and in nurses, which M. Delpech described in 1846 under the name of idiopathic muscular spasms; which Trousseau studied in his clinique under the name of “tétanie;” and which Dance, long before (1831) called “intermittent tetanus.” The malady in question is true tetanus, with its train of grave and generally fatal symptoms.

In his thesis for the Obstetric Society (1834) Velpeau gives a case; another is noted by Fournier-Pescay (1821). *The Medico-Chirurgical Review of Paris* (1849) mentions three. Similar observations have been made since in England and France. M. Hervieux devotes a chapter to this important subject in his work on puerperal diseases. Moreover, true tetanus occurring in lying-in women is sufficiently rare to make it seem useful to us to notice a case which occurred recently in practice. One of our young confrères has made this the subject of his inaugural thesis. This work, in which the disease is treated with remarkable talent, will well repay examination. (“On Puerperal Tetanus,” by J. J. Lardier, 1874.)

The patient was a woman aged forty-three, the mother of six children, and subject to hysterical fits for the last year. She gave birth, on the 8th March, at her house, to a puny child, at the eighth month, leaving her bed after four days, as was her custom. Nine days after the labour she felt a difficulty in deglutition and stiffness of the jaws. Two days after she had painful contractions of the side

and back of the neck. She was admitted to hospital on the 20th March, twelve-days after her confinement. Dysphagia, trismus, opisthotonos, well-marked. The teeth cannot be separated. The face shows the "risus." Complete absence of fever. Temperature, 99° (or 37.7° Cent.). Nothing in the urine. The lochia flow regularly, and the breasts are flaccid, containing little milk.

The following days the contractions become greater. The head is thrown violently backwards, the patient resting on the shoulders and buttocks, dysphagia increasing. From time to time violent spasms come on, in which the face is purple, the mouth foaming, the body agitated by tonic contractions, without, however, any loss of consciousness. During these attacks the patient cries out plaintively. From her admission till her death on the 25th March the temperature gradually increased, reaching a maximum of 106° F. (or 41.2° Cent.). The pulse was 136. The last day were noted crepitus and dulness at the base of the right lung.

The patient died at two in the morning. The temperature at death was not taken.

The treatment was chloral draughts, cupping, and chloroform spray over the spinal column, and exercised no influence over the disease.

The autopsy, beyond showing great congestion with engorgement of both lungs, especially the right, and marked injection of the vessels at the lower region of the cord, did not reveal any lesion. A microscopical examination of the cord was made. The brain showed no alteration. (For further details *vide* M. Lardier's thesis.)

Although "tétanie" (muscular contractions) is generally a mild disease, it must be acknowledged that between it and true tetanus, as in the case above mentioned, there are certain close analogies, which M. Hervieux has noted in his work on puerperal diseases. We must note, however, that tetanus has only been observed at a period succeeding parturition, while "tétanie" is observed during pregnancy, and in nurses, many months after confinement. It has been seen in children, and even in men. Young women are particularly subject to it (Trousseau), while tetanus generally attacks older women. "Tétanie" is only rarely fatal. Delpech does not quote one case of death: two or three cases which have been collected would almost be classed as true tetanus. "Tétanie" attacks the extremities, and the paroxysms are separated by intervals of calm and health. It seldom affects the muscles of the jaws and of the chest, and the heat of the body is not increased as in tetanus. It may be seen, therefore, that without denying their analogy, and while classifying them as morbid species, they may be clearly distinguished by their etiology, course, and above all in prognosis.

The conditions in which tetanus occurs in parturient women present some interesting points for consideration. *A priori* it is natural to make the uterine wound the starting point of the neuroses. In effect, all the cases yet noticed followed either abortion or labour.

Therefore, the uterine wound plays an important part in the affair. Moreover, tetanus shows itself by preference beyond those conditions marked by the development of ordinary puerperal diseases. It has been noticed both in town and country in those women confined without the hospital. It generally supervenes at a time when the patient seems safe from any of the great puerperal dangers.

This circumstance weakens Simpson's theory that it is not impossible that some poison springs from the uterine lesion analogous to strychnine or brucine.

In fine, it is not clear why such a poison should be developed by preference in patients in the best hygienic state, and at so relatively late a period. As determining causes hemorrhages have been said to cause it, obstetrical manœuvres, moral impressions, and above all cold. The influence of these causes in producing the disease is anything but proved. They exist in the etiology of all puerperal diseases; but nothing points to them particularly as causes for tetanus. In the case under notice, there existed merely a nervous excitability, exhibited for some months by hysterical attacks.

Thus the etiology of puerperal tetanus is quite as vague as that of the ordinary surgical disease. We certainly have the uterine wound as a starting point, but the puerperal state does not explain matters; there remains merely traumatic tetanus consequent on the uterine lesion. Monsieur Lardier insists on this distinction, and on the particular conditions established in the organism by the bare fact of the puerperal state existing.

As regards the pulmonary congestion and serous infiltration, M. Lardier asks whether this does not show puerperal infection. We think it may be explained more simply by the fact of the diaphragm being embarrassed by the tetanic spasm, causing a diminution in the respiratory efforts, stagnation of the fluids, congestion and edema.

On the Advanced Forms of Osteomalacia.

Dr. C. Henning (*Archiv f. Gynæk.* Bd. v. Heft 3) has an elaborate paper on this subject. He begins by giving a lengthy and detailed account of three cases of osteomalacia. In the first the pelvis was deformed in a high degree, and the Cesarean section was performed: in the second the osteomalacia was complicated by hyperostosis: the third was a case of osteomalacia in a sterile woman. The author then reviews the various opinions and theories that have been held and brought forward upon this subject, of which so little is known, and refers to the experiments made upon certain animals, the horse, cow, &c. But the great object of the paper is to give prominence to the relation between osteomalacia and pregnancy and labour. With regard to this point the following facts obtained by the author from a considerable number of cases of osteomalacia are to be noticed. Labour took place naturally in seventeen cases: two women had natural labours twice, three women had natural labours three times,

and one had even eight natural labours. The labours were, however, for the most part severe: in one case alone was the death of the child reported. Premature labour occurred spontaneously in four women; in one of them it twice occurred. There were five cases of spontaneous abortion; one of these twice aborted. In four cases premature labour was induced: two of the children were born still, and one died after birth. All these women did well, with the exception of one, who died before she was delivered. Abortion was brought on four times, once at the fourth month. In all these cases the mothers were saved; but in one the progress of the osteomalacia was accelerated by the abortion.

Eight women were delivered by turning; on one woman it was twice performed. The forceps were applied twenty-five times; on one woman twice, on another four times, and on a third five times. Three children were born dead: one of the women died subsequently.

Perforation and cephalotripsy were obliged to be performed in eleven cases. All the women recovered: one died five years later from the advance of the osteomalacia. In five cases rupture of the uterus occurred before any operation could be performed. The Cesarean section was performed on thirty-six women: eleven recovered; and thus there was a mortality of 69 per cent: nineteen children were saved (eleven boys, one girl, and seven in which the sex is not given).

Gynecic Summary.

Transfusion of Blood—Success.

Hemorrhage from the womb apart from pregnancy and parturition is not generally abundant enough to induce a fatal result; nevertheless Monsieur Béhier recently had occasion to perform transfusion in a woman admitted for menorrhagia which in a few days had reduced her to a state of great anemia.

The following are the facts of the case:—

The patient, of rather vigorous constitution, came in under M. Béhier, the 24th of January, 1874. She had lost blood profusely for a fortnight, and had had fainting fits on several occasions. She presented on admission all the symptoms of serous hemorrhage, a flow of pale fluid blood existing at the vulva. Two days after admission, there was an abundant loss, which was checked by the tampon, the patient complaining of severe headache, and returning the ingesta as soon as taken. The next day the flow continuing in the form of an oozing of pale blood, with vomiting and increasing weakness, causing the greatest prostration and the last degree of anemia, M. Béhier feared this state could not exist further without endangering the patient. He therefore decided on performing immediately transfusion of blood

with the apparatus of M. Mathieu. The blood furnished by M. Strauss, "chef de clinique," was injected, to the extent of 80 grammes, about $2\frac{1}{2}$ ounces, into the median cephalic vein without defibrination or other preparation whatever.

Two hours after the operation a change was easily observed in the state of the patient, the previously small and miserable pulse became more lively, the hands became warmer, and she spoke saying she felt stronger. In another hour she looked calm and natural, the tongue and limbs from having been cold were warm, and the patient replied cheerily to questions. Five hours after the operation she had soup and wine, which were well borne. The patient feels well, and the flow from the vulva has stopped. The next day she was more improved, and in a few days she left perfectly cured.

The facts of this case formed the subject of a communication from M. Bouley to the Academy of Sciences, which we find worth reporting in part. The Professor, says M. Bouley, insists specially on the following points:—

1. The utility of injecting blood pure in its nature, without previous defibrination, or previous lowering of temperature. These preliminary operations, made with the view of preventing the coagulation of the fibrin are useless when the operation is done promptly, which is not difficult. M. Béhier insisted on the utility of injecting blood, not dead, as results from the preparatory means adopted, but quite living and loaded with globules unaltered by whipping and exposure to cold, and furthermore offering still intact the albuminoid matters, the nutritive qualities of which are certainly considerable, while at the same time it promotes the suspension and the freer circulation of the blood salts.

2. M. Béhier insisted on the possibility of simplifying one of the most important steps of the operation. One of the drawbacks in the performance of transfusion was the difficulty of introducing into the vein receiving the blood, the cannula which transmits it. Often in using the trocar, one ran the risk of either wounding the vein without entering the vessel, or of piercing the posterior wall of the vein. Hence the production of a thrombus making the introduction of the cannula very doubtful. Nélaton, to obviate this, proposed the incision of the skin on a level with the vein about an inch long, to expose the vessel. M. Béhier thinking that in a debilitated subject such an operation is not without danger, proposes a simple operation which every one should know how to practise. He advises making in the vein of the transfused person a small wound (as in bleeding) sufficient for the introduction of the obtuse cannula by a blunt mandril. This is sensible and practical. The apparatus M. Béhier used is Matthieu's modification of Moncoq's, the manipulation of which is easy and simple.

3. M. Béhier insisted, however, on two absolutely indispensable precautions—viz., on the necessity of injecting the blood slowly, to avoid a too sudden filling of the right ventricle, which would be

strained and somewhat paralysed by a too sudden repletion, causing an arrest of the cardiac circulation, pulmonary asphyxia, and death. He notices as a valuable sign of such an occurrence, the production of slight fits of coughing, which must hinder the injection of blood.

4. For the same reasons and to avoid the like accidents, M. Béhier insisted on the injection of only small quantities of blood. In the case in point, 80 grammes only were injected with complete success. The patient left completely cured. She had borne a course of steel after the operation very well, the catamenia returning regularly from the time of the performance of transfusion.—*Annales de Gynécologie*, Mai, 1874.

Transfusion of Lamb's Blood into Man.

By R. SCHLEIP, M.D., Berlin.

Dr. Schliep furnishes the following account of this operation to the *London Medical Record*:—

Dr. Hasse, of Nordhausen, relates in the first part of a valuable and very interesting monograph, sixteen cases of mediate transfusion of venous defibrinated human blood, performed by himself during the years 1869-72. In the second part, he describes fifteen cases where he performed immediate transfusion from the carotid artery of the lamb to the vein of the patient during 1872 and 1873. The third part gives an account of his method of performing both mediate and immediate transfusion.

The first series of Dr. Hasse's cases show four cases with good results (phthisis, two cases of chlorosis, and one of marasmus of a child); ten cases with temporary improvement, but with death following at last (five cases of phthisis, one of pyemia, one of amyloid degeneration, one of marasmus after dysentery, one of marasmus after enteritis, one after scarlet fever); and two cases where little or no improvement followed, but which did not die (anemia following abortion and uterine disease). Cases of immediate death after the operation did not occur.

The second series contains fifteen cases where lamb's blood was injected by the immediate method. There are eleven cases of good, even surprising results (six cases of phthisis, one of anemia after enteritis in a child, one of anemia after *placenta prævia*, two of anemia after puerperal disease, one of chlorosis); three cases where the improvement was only slow and less perceptible or temporary (one case of caries of the spine, one case of anemia resulting from pneumonia and dysentery, and one of cancer of the stomach); and one case of tabes dorsalis, where death occurred four hours after the operation, with a rise of the temperature to 109° Fahr.

Respecting this one case of unhappy result, Dr. Hasse believes that in consequence of the severe disease of the nervous centres, transfusion would better have been avoided, but that the lamb's blood itself was not the cause of death. The success was most

brilliant in those eleven cases of almost otherwise incurable diseases where the operation really saved the lives of these patients; and it seems that we have now in transfusion a very valuable means of treating of consumption, even in desperate stages. The general state of these patients soon improved, as well as the local symptoms.

Dr. Hasse thinks that the use of lamb's blood is preferable to that of defibrinated human blood, not only because danger to the blood-donor is avoided, but also because the effect of lamb's blood on the disease is more powerful and permanent. He lets pass over as much blood as the patient can bear—viz., till certain symptoms appear, which regularly follow this kind of transfusion.

During the first twenty to thirty seconds the patient has a warm feeling running up the arm. The veins begin to swell, the skin of the arms and the chest becomes red, and some perspiration may be seen on the face. Then dyspnea sets in, and is followed by a feeling of fulness of the abdomen. Sometimes, sickness and an irresistible tendency to go to stool are observed. At last headache, giddiness, and fainting take place. All the patients complained of pain in the back, which lasted sometimes several hours, but sometimes disappeared very soon. In a time varying from ten minutes to an hour after the operation, shivering sets in, with a rise of temperature for several degrees. This is generally followed by perspiration and a sound sleep, from which the patient awakes in greater strength. In several cases the urine on the following morning contained albumen and hematin, which disappeared the same day; but no blood-corpuscles were ever found. Some days later, in most cases, there was an eruption of urticaria.

The mode of operating employed by Dr. Hasse is simply as follows. He exposes the carotid artery of a lamb for four or five centimetres (about $1\frac{1}{2}$ to 2 inches), puts a ligature round the vessel at the peripheral end, and inserts into the central part of it a glass tube filled with a solution of bicarbonate of soda, and fitted with an india-rubber tube from five to six centimetres long. Then he inserts a glass tube, also filled with the solution, into the vein of the patient. He draws off the india-rubber from the patient's tube, and, having seen that the stream of the blood passes well from the lamb, connects the two glass tubes with the india-rubber fitted to the lamb's cannula. Now transfusion is going on, and the proceeding is continued until the above-named symptoms show themselves, and till the oppression and dyspnea indicate that the operation should be interrupted. He then applies two ligatures to the vein and cuts it, dressing the wound in an ordinary surgical way. He has never seen phlebitis after this mode of operating.

[From a private letter of Dr. Hasse, we know that he has enlarged the number of cases where he performed transfusion from a lamb since, and we can only congratulate him for having with such energy and success promoted this highly interesting object, in spite of the many difficulties of practice in a provincial town.]

Ovariectomy in the Backwoods of South America.

Dr. D. G. Stevens of Rio Bueno, Chili, gives the following interesting history in the *Medical Times and Gazette*:—"We had to send to Valdivia for chloroform—four days' journey. In the meantime, I occupied myself in preparing the patient, in considering with what instruments I was to perform the operation, and selecting and instructing my assistants. The instruments were a trocar made from a piece of *colhuíhue** about ten inches long, hollowed out, and sharpened to a point at one end, and at the other connected with a piece of india-rubber tubing from an enema syringe; the instruments from a 'Charrière' pocket case, and a pair of craniotomy forceps. The assistants were a Catholic missionary, two Indians, and a half-blood. The ligature was made of raw hide, with two pieces of wood fastened at the ends in order that more power could be used in pulling it tight; and at the time of using it was to be dipped in warm neatsfoot oil.

"*Jan. 25th.*—The chloroform having arrived, we commenced at daybreak the heating of the hut to the proper degree, by filling a large square hole excavated in the centre with hot coals made from a root fire burning outside. The board and the instruments were also prepared outside; and at 10 A.M. we were ready. I administered chloroform, during which time the table and the instruments were brought in; insensibility produced, she was lifted with difficulty on to the table. The priest took his post at the head, with the chloroform mask; an assistant on each side, and the other behind me to steady the feet. I began with a wound of four inches long in the linea alba down to the peritoneum, tied two small dribblings or oozings, dried the wound with cotton-wool, and made a very small incision in the peritoneum, when the fluid rushed out like a fountain into my face. I enlarged, and the tumour presented, but it appeared solid; but, by a little management, I was able to move it on to one side, and discovered fluctuation. The trocar introduced, the fluid began to run well at first, but gradually became thicker. I disconnected the tubing, and it again flowed from the bamboo tube, but soon stopped. I enlarged the opening two inches, and found another cyst, which was emptied the same as the first. I was now able to introduce my hand behind the tumour, and found it free in every part. The craniotomy forceps was applied, but we could not get it out without enlarging the wound a little more at the upper part, when, on raising the patient a little more, it came on to the board I had ready for its reception, and behind it a rush of the ascitic fluid. The pedicle was rather long, but flat; the raw-hide ligature was applied to it, and tightened by means of the two pieces of wood, pulled by the two assistants on each side of the body until it was almost buried in

* A species of bamboo.

the parts, and then made fast with two lasso-knots,* the ends cut off, and the whole dropped into the cavity. The cavity was mopped out with cotton-wool, and the wound closed with fine iron-wire sutures, pushed through from within outwards and twisted, and a superficial continuous suture of silk. Water dressing was next applied, and a warmed *bayeta* flannel roller passed twice round the body. Consciousness returned before I could get her off the table, owing to the priest not attending to the chloroform, being too occupied and astonished at my movements; in fact, throughout the whole proceedings I had constantly to attend to the pulse. Great exhaustion followed, and I had first to administer warm wine-and-water, and afterwards warm whisky-and-water, apply friction to the extremities, until finally, at five o'clock in the afternoon, she had improved very much, with a pulse at 115, and the surface warm and moist. My thermometer was broken, so I could not note the temperature.

"I remained in the neighbourhood twelve days to attend to her, during which time she went on well with the exception of a little vomiting the day after the operation, owing to the husband giving her warm lamb's-blood† without my knowledge. The first pair of sutures were removed on January 28th, and so on day by day one or more was removed, until the ninth, or middle one, was taken out.

"*Feb. 25th.*—Saw her again. The wound entirely healed, but she complained of pain in the left side near the pubes. I ordered her rest and good diet, and care as to the state of the bowels.

"*March 15th.*—I saw her. She could stand at the door of the hut to receive me; said she had not the slightest pain, but was still very weak.

"*June 28th.*—She came down from the lake to the village of Rio Bueno to see me—a day's journey through the forest. The menses had returned, and she was quite well. She said she felt a fullness at each menstrual period.

"The tumour consisted of five larger cysts and many smaller ones, but only two had fluid, which was of a black-greenish colour; the rest contained a substance like half-cold glue, with a cavity in the centre containing a semi-fluid. Weight without the fluid, thirteen pounds and a half.

"The patient continued to enjoy good health until December, 1872—nearly two years—when she, with her husband, went to the funeral of a relative, drank so much that she became intoxicated, and on passing a river the horse stumbled and fell; the current took them down, and she was drowned, and the horse saved himself.

"Never having seen the operation nor read any special work on the subject, I had nothing to direct me but the short account given in the last edition of Dr. Tanner's 'Practice of Medicine.'"

* One on each side—i.e., one tied first, and then the ends carried round to the opposite side; a slit made in one end, and the other cut in the form of a knob, which passes through it, thus preventing slackening through swelling.

† The Indians eat the blood of the animals they kill, mixed with salt and Chili pepper, while it is warm.

Pædiatric Summary.

On the Leucorrhœa of Little Girls.

Lecture by M. BOUCHUT, Médecin de l'Hôpital des Enfants Malades, &c.

We have at the present time under observation two cases of leucorrhœa, one in a little girl ten years of age, the other in a child four years of age. As this disease greatly preoccupies the mothers, who, in their ignorance of the things of life, cannot comprehend that organs in process of development, and which are supposed to be dormant and far from physiological activity, can become diseased, I am desirous of telling you what is the nature of this malady, and what is its treatment.

The first case is that of a child ten years of age, who has been ill for three weeks. Without any known cause, without previous disease, the child was taken with itching and abundant whitish discharge, which stained the linen green, as in women affected with blennorrhagia. The vulva is hot, its folds are impregnated with pus, and the orifice is swollen and dusky wine-red. No follicles or ulceration are seen on the mucous membrane, and lateral or hypogastric pressure does not cause the escape of pus from the vagina. The clitoris is red, swollen, and passes much beyond the labia majora.

As regards antecedents there is no trace of scrofula, but there is eczema of the head, in the hair, and pityriasis on the face. It is to me evident that this child has an herpetic diathesis—an important observation, which suffices to account for the leucorrhœa.

The other child had for several days an indeterminate febrile state, attending which was leucorrhœa followed by *aphthæ* of the vulva, which have ulcerated, and on which phagedenism has created profound invading ulcerations, characterizing a particular form of gangrene of the vulva. This leucorrhœa is a result of defective care and of proper washing, indispensable in all the acute diseases of little girls.

These two cases are essentially different, for the one is a diathetic leucorrhœa, and the other is an inflammatory leucorrhœa due to want of attention. You will find these two orders of causes in many cases of leucorrhœa, but they are not the only ones. We must add to these, attempts on virtue, which are very common, and which, by attrition of the parts, engender an inflammation of the parts followed by leucorrhœa, or by blennorrhagic or syphilitic contamination, determining a veritable blennorrhagia or syphilis—that is to say, chancre and its consequences. If to these causes you add masturbation, which irritates the mucous membrane of the clitoris and vulva, and then oxyurides of the rectum, which, passing from one part to the other, provoke irritation of the mucous membrane and itchings, you will understand what are the causes of leucorrhœa in little girls.

The most frequent cause is herpetism or herpetic diathesis, scro-

fulism, and dirtiness, which, in the acute diseases of childhood, is followed by the most sad consequences. In effect, in typhoid fever, septicemic disease, small-pox, virulent disease, one often sees the vulva covered with a muco-purulent discharge of a very irritating nature, and if one does not have the children washed, a vulvar folliculitis results, followed by ulcerations with red edges and grey pseudo-membranous base, resembling *aphthæ* of the mouth. A little later these ulcerations become phagedenic, increase in every way, causing considerable loss of substance, and destroying the vulva and perineum to the anus. There is extensive molecular gangrene.

In other cases, under the ulcerated follicle a sudden engorgement of the cellular tissue occurs like a hard core, accompanied by tumefaction and redness of the labia majora; then a black eschar appears, which rapidly extends, and forms true gangrene of the vulva. This is escharifant gangrene, which is nearly always followed by death.

These kinds of leucorrhea are the most grave and least common. The others connected with scrofula or herpetism do not involve like consequences. They remain some weeks or months and then disappear. Their nature is indicated by the scrofulous or herpetic state of the children. The seat of the leucorrhea of little girls differs absolutely from the seat of leucorrhea of women and young women. Whilst in the adult leucorrhea is always vaginal or uterine, in the little girl it is always vulvar. It only occupies the external parts of generation. It is the mucous membrane of the great and lesser lips of the vulvar orifice which is affected. In the two children which you see in my "service" the suppuration comes from the exterior, and the vagina is of no account. I have just shown this to you on the patients, and you have been able to acquire the exact proof of my statement.

The liquid secreted is acrid, irritating pus, yellowish-white, colouring the linen green, and more or less abundant according to the case. It provokes a disagreeable pruritus, which forces the children to scratch, and which sometimes gives rise to habits of masturbation, which they have not previously had. Again, as the liquid is very irritant, if the children after having touched the vulva with the hands and soiled the fingers, rub their eyes, very grave purulent ophthalmia sometimes results; hence the necessity of putting on gloves or long chemises tied beyond the feet.

After what I have said of the leucorrhea of little girls, and of its different nature, you will see that the treatment should not always be the same, and that it varies according to the presumed cause of the disease.

In leucorrhea caused by emigration of oxyurides from the rectum to the vulva, the vulvar orifice should be washed with carbolic lotions, enemas of the same should be given, or of soot, and suppositories of mercurial ointment should be put into the rectum.

In the leucorrhea of acute diseases lotions of water and aromatic

wines may suffice. But if there are follicular ulcerations or phagedena the following ointment should be used :—

Axunge, 30 parts
Coal-tar, 3 „

and night and morning washings with coal-tar saponine.

If instead of phagedenic ulceration there is an eschar, one should detach it, and dust the wound with powdered camphor.

Now, for the leucorrhea produced by scrofula and herpetism, we must administer internally cod-liver oil and syrup of arseniate of soda. In these cases we ought to prescribe baths containing carbonate of soda, sulphurous or sublimate baths, lotions of sublimate, of coal-tar saponine, of carbolic acid, and if the disease resists, paintings with solution of nitrate of silver. The leucorrhea never resists these combined measures, and the combination of internal and external treatment which I have mentioned suffices to triumph over this disease.”—*Annales de Gynécologie*, Mai, 1874.

NEWS.

Annual Meeting of the British Medical Association.—This Meeting will be held at Norwich, on the 11th, 12th, 13th, and 14th of August. An address in Obstetric Medicine will be given on August 14th, at 10 A.M., by Dr. Matthews Duncan.

The following will be the Officers of Section C :—OBSTETRIC MEDICINE.—*President* : Dr. Churchill, Dublin. *Vice-Presidents* : Dr. W. S. Playfair, London ; Dr. Steele, Liverpool. *Secretaries* : Dr. Edis, 23, Sackville Street, London ; F. Image, Esq., Westgate Street, Bury St. Edmunds.

Many papers of obstetrical interest have been promised.

Midwifery Diploma of the Queen's University in Ireland.—The General Medical Council had the following legal opinion laid before it on July 9th, 1874. “We are clearly of opinion that the Medical Council cannot register the diplomas in midwifery granted by the Queen's University in Ireland, (Signed) G. Jessel, Chas. Bowen.”

Communications have been received from Dr. Hayes, Dr. Cullingworth (Manchester, with drawing), Dr. Stephenson (Edinburgh), Dr. Edis, Dr. John Williams, Dr. Godson, Dr. Wiltshire, Dr. Carter, Dr. Owens, Dr. Chadwick of Boston, U.S.A., whose paper we shall be happy to receive, and Dr. Hall Davis, whose letter arrived too late for insertion in the present number.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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ADDRESS IN OBSTETRIC MEDICINE.

*(Delivered at the Annual Meeting of the British Medical Association
at Norwich, August, 1874.)*

By J. MATTHEWS DUNCAN, M.D.

Physician to the Royal Maternity Hospital, and Lecturer on Midwifery in the
School of Medicine, Edinburgh.

PUERPERAL PYEMIA, ETC.

NOW-A-DAYS, as compared with even a quarter of a century ago, obstetrics have flourished and grown so rapidly, that he who is called upon to give an address such as this cannot but feel embarrassed in the selection of the matters to which he would call attention. If he is not to present his audience with a mere catalogue of details, he must exclude great departments; if he is not to be a mere registrar and exponent of the opinions of others, he must further restrict the scope of his review.

At one time, and that so late as last century or early in this, the whole field of medicine could be with comparative ease occupied by one mind. The same man practised and also taught all its branches, medicine, surgery, and their subdivisions. If one man proposed to do this now, we should look on him as a foolish pretender. The great medical genius of the scientific Helmholtz already has narrow limits which it cannot overpass; the great practical talents of

Thomas Keith and of Spencer Wells are restricted in their beneficence by close boundaries.

Rarely and at long intervals in the course of the ages a powerful mind is produced, such as that of a Newton in physics, who, using the scattered knowledge accumulated by his predecessors, succeeds by his own discoveries and generalizations in restoring simplicity where before there was complexity, and in making for his successors a sort of royal road to the science of his day. But such a master mind, while on the one hand it simplifies and builds by generalization, does, on the other hand, increase complexity and number of incoherent details by stimulating progressive inquiry. We hope we shall never again see the return of those dark days when one man could dare to profess or to practise the whole science and art of medicine.

It is by division of labour that we secure growth, and it is vain to regret the feebleness of our powers. As each department of medicine grows, it is, like its parent stem, doomed to subdivision. He, however, who brings the widest attainments and the most varied talents to bear on his chosen branch, will, *cæteris paribus*, be the greatest in his department. But who is equal to the demands of any department? To tell the truth, there is not among us a single man who has mastered all the details and work of even one single individual topic. One finds that the histology of his branch fully occupies his powers; another is similarly placed in regard to its chemistry; a third finds full occupation in its physical relations; a fourth, gleaning behind all these, finds his hands full in trying to be practically useful to his patients.

Partly as a result of the subdivision of labour, greater progress is being made now than at any previous period in the history of medicine; and there is no greater exhilarant and stimulant of enthusiasm than that very progress which is the result of well-judged zeal. In the field there is work for minds of every kind, for talents of every description: for him who truly observes and accurately notes details, for him who arranges or classifies, for him who experiments, for him who suggests and demonstrates conclusions, for him who confirms or overthrows by the process of verification. Every one of

us should take some part in this work of advancing medicine, a more important part than that humble and useful one in which all should, in addition, take a share, the attentive listening to and applauding the diligent and the successful.

There can be no doubt as to what is the paramount cause of our more rapid progress in recent times. It is the adoption of proper method ; it is the modern attempt to found or still further build up a science of medicine on what is known as the Baconian plan. Imagination and ratiocination are not even now excluded from the operations, but nothing is held as proved by mere reasoning ; and when the philosopher strays far from the solid shore of rocky facts he loses his intelligent audience, who have no interest in his occupation of beating the air. The medical man proceeds nearly in the same manner as the physical philosopher. He observes by the naked eye, then by the microscope, and this instrument he aids by numerous experimental plans of hardening, cutting, tinting, and staining. He applies so far as possible physical laws to explain natural and morbid processes. He institutes new experiments to elicit truth. He makes the same appeals to chemical science, and to the practical chemist as he makes to physics and the physicist. He reasons on what he obtains, and tests the truth of his conclusions, verifying by further observations and further crucial experiments.

Everyone who knows the history of midwifery must admit that it is by these methods alone that progress has been made. The greater part of what has been attempted, and the greater part of what is being attempted, is not according to this method ; and the labour is vain. The substantial progress, often seen at the time only by a few, and appreciated by a small circle, is achieved by scientific method, and is like the grain of mustard-seed which grows and grows till it be a great tree. Obstetricians can justly boast that, in some departments, mere obstetrical knowledge is ripening into a science of obstetrics, a boast which happily some other subdivisional branches of medicine can truly make.

The first subject to which scientific obstetricians, as a matter of course, direct themselves, is natural labour in all its

varied aspects; and it is in some parts of this that the greatest advances have been made. The great idea of "mechanism" so loudly proclaimed by Levret is in process of being worked out. The first stages have been nearly completed by the writings of W. Hunter and Smellie, of Ould, Solayres, Saxtorph, and Nægele. But, now that their inquiries are completed, we are landed in a more difficult and higher stage of this investigation, a stage demanding much more than the good powers of observation and description which sufficed for the former. Standing side by side with contemporary workers at these outposts of science, we are not good critics of the comparative value of their works; but among them we may signalize names familiar to you all—Hecker, Kehler, Schroeder, Poppel, Houghton, Schatz, Küneke, Schultz, and many others.

The majority of practitioners, however, take far more interest in the management of morbid labour than in any other department of obstetrics; and this for the evident good practical reason that there lie the questions of the highest, immediate, most pressing urgency—their difficult cases and how to manage them—questions which, in the interests of the poor patients and of the anxious practitioners, brook no delay, which cannot wait for the slow decisions of science, however valuable these may be when at last they do come. But, even though science is not at hand to offer the solution of difficulties in practice, it is the duty of every obstetrician, with a view to the advantage of his confiding patients, to watch the progress of science, if not to contribute to it, as well as to select more or less empirically among modes of treatment. He should at once contribute to build up science, and at the same time be ready to meet in the field of practice the great difficulties that suddenly come in his way. Like the Jews of old, he should work with one of his hands in the permanent work, while with the other hand he holds a weapon wherewith to fight against Sanballat and Tobiah. He who directs his professional life after this manner will certainly be the best practitioner, the most useful to his immediate patients, and, peradventure, happily useful indirectly

to the patients of all instructed practitioners in all coming time.

There is no department of obstetrics from whose scientific progress more is to be expected by the mere practitioner than that of morbid labour. This is a branch in which a great deal of valuable work has been expended with invaluable results, but much more still is required before we can style our practice rational or scientific. Morbid labour in contraction of the pelvis is a well known and typical part of this practical department; and, to permit brevity as well as to give point to our remarks, let us be supposed as referring to it alone meantime. Now, where is the practitioner to look for guidance in this matter? He can nowhere find a secure resting-place. What views is he to adopt as to mechanism? What treatment is he to pursue? What instruments is he to use? Whom is he to adopt as his guide—Collins, or Simpson, or Dubois, or Hodge, or Barnes, or Hicks, or Spiegelberg, or Schroeder, or Leishman? He must act, and to the best of his judgment and ability. To decide among these able and ingenious but discordant advisers he is unable, and there is no hope of his being very soon in a position to do so. However dogmatically the teacher may write on these subjects, he settles nothing for anyone but himself and his disciples. The elementary data necessary for arriving at conclusions on these subjects are not yet acquired; but they are being rapidly elaborated. When they are worked out, then there will be a vast diminution of the area over which there is at present mere difference of opinion; and many practical directions will flow from such knowledge which, not then resting on opinion, will command, nay, compel, general consent.

To secure this position for the practice in contraction of the pelvis, there must be, first of all, a nearly complete view of the whole mechanism of natural labour, not merely of what is popularly called mechanism in our text-books, and we know that we are very far off from this complete view. Then pelvimetry must be improved, and even uterine craniometry. Then the modes of progress of labours in contracted pelvis of different degrees and kinds, and both when assisted and when

unassisted, have to be made out. Then we have to study the explanations of the modes of progress. Then we have to accumulate experience and laboratory experiments of complexity and variety in order to discover what is the best direction of treatment. Then we have by similar means to find the tools best suited for effecting our varied purposes.

In every one of these departments, we are proud to say, most valuable labour is at present being expended, and light is being converged on this great practical matter—delivery in cases of contracted pelvis. Till this light makes the subject clearer than it is at present, we can have no final adjustment of our differences and difficulties. Mere dogmatic empirical teaching must be allowed to prevail. We must, as people do in matters of politics and religion, choose our authorities and do our duty under them as we best can. It would be tedious to enumerate the names of men who have recently contributed to the progress of this subject ; but, at the risk of making omissions which are to be regretted, we may signalize among foreigners Michælis, Litzmann, Hecker, Kehrer, Dohrn, Spiegelberg, Olshausen, Fehling, Cohnstein, Pajot, Joulin, Breisky, Braun, Martin, and Von Haselberg ; and among ourselves Radford, Churchill, Simpson, Barnes, Hicks, Playfair, and Kidd.

After natural and morbid parturition come subjects of far more difficult investigation, natural and morbid puerperality. As their secrets are far more deeply hidden, so our progress in bringing them to light has been less and is more recent ; yet it is made in a way strictly analogous, if not identical, with that which has conducted us to so much acquaintance with parturition. The steps of natural healthy recovery from childbearing are first investigated ; and here much has been attained through the labours of Kölliker, Farre, Priestley, Robin, Friedlander, Turner, and many others. Then, in logical order, we come to morbid puerperality, the subject more immediately interesting to accoucheurs, one of the most important topics, not in obstetrics only, but in the whole of medicine, one which has been discussed with an excessive copiousness, but with very little advantage till recent times.

There is in the whole large library of puerperal diseases not a work of considerable value before the early part of this century. We have to come down to the names of Dance and Cruveilhier, and Robert Lee, and Virchow, and Pasteur, and Sanderson, and Lister to find the indistinct bridle-path which is quickly becoming an evident broad and great line of beneficent scientific progress, a progress whose practical results will overflow, not obstetrics merely, but surgery also and medicine proper. Old books on puerperal diseases are full of disjointed facts and mere discussions. It is only now when we have resorted to statistics, to anatomy, and to researches by the microscopist and the chemist, that our way clears up towards a comparatively full intelligence of the awfully important puerperal diseases. The old works of Puzos, of Willis, and of others, are nearly as valuable as most of those of the last generation of authors. But since the times of phlebitis and lymphangitis began, this department has ceased to move in a circle of no progress, and almost every day we are reaping new increments of knowledge, not only valuable in themselves, but indispensable to still further advances.

In connexion with this subject, there is a preliminary inquiry whose importance is self-evident, and which, remarkable to relate, has only recently been discussed formally, and with sufficient means—the mortality in childbed, or total mortality of childbirth and in childbed. How many women die from all causes during childbirth and in the puerperal state? Of course, such a question, lying on the surface, has been considered and answered, but the responses have been most insufficient and erroneous. The ordinary belief seems to be that there is, in connexion with childbirth and lying-in, no mortality in a well conducted practice. Miss Nightingale says that deaths from puerperal diseases ought never to arise after delivery in a properly conducted and managed institution for lying-in women. In a late number of one of our principal medical journals, appears a report of one of these properly conducted and managed institutions. The hospital is a military one, and not a death is reported; and the article is evidently written with a view to show benighted civil obstetricians what is the result of proper conduct and manage-

ment. I have often heard sanguine medical men say that in the course of a long and large practice they had not had a single fatal case. Now all such beliefs, reports, and statements, are mere incumbrances of inquiry, and are to be thrown overboard, if not more ungraciously dealt with. We have no time to trifle with such nonsense, for we are everywhere surrounded by awful deaths in childbirth and in childbed, where there has been, so far as can be discovered by ordinary mortals, nothing but proper conduct and management.

Another response to this great question is familiar to all ; it is derived from Merriman, and has often been repeated, not only as evidence of the mortality of childbirth, but also to show the successful progress of obstetrical therapeutics by the rapid diminution of the maternal mortality. It requires such a stretch of credulity to place the slightest confidence in Merriman's tables, that I do not regard myself as justified in taking up your time any longer with them. More recently, and on much higher, even on official authority, somewhat similar statistics have been proclaimed as evidence of the progress of obstetrical therapeutics from decade to decade ; but, alas for us, the evidence will not bear inspection, and we shall not inspect it. Even now, in 1874, we are only striving to reach a sound conclusion as to this mortality ; and after all our labour, official and private, have no statistics to be relied on for the comparison of the results of successive decades or of longer periods. The importance of the question needs no demonstration, and it must be solved in a scientific manner. We are seeking not what we fancy or wish, but what is. There can be no doubt that the death-rate does represent marriage and childbearing as a most perilous ordeal for a young woman to encounter ; and it is not good reasoning to use this, as a great author has done, to prejudice us against receiving what may be proved. During the whole life, including intra-uterine existence, the female half of mankind has a great advantage over the male in point of mortality, except that for a considerable time childbearing brings the female nearly to the level of the male ; and that, for a less time, the risks of primiparity sink her below him. Childbearing is in these kingdoms the special, and, so far as known, the only

special great cause of enormous increase of female mortality above what it would otherwise be. Primiparity produces a great exaggeration of the childbearing risks. It is this mortality that we seek to estimate, and you observe it is of the highest human interest ; but it is for medicine of special importance, being a cardinal element in the solution of the question of the value of hospitals. These noble institutions, the lighthouses of practice, have had their reputations tampered with on the most insufficient grounds. If we are ignorant of what may be called the normal mortality of childbirth and lying-in, how can we justly judge the hospital mortality ? If we do not estimate the excess of special, and, in a sense, just causes of mortality in hospitals over those acting in the country generally, how can we fairly measure the salubrity of maternities ? It is impossible to do so, yet there has been a lamentable and injurious amount of such mere cavilling with institutions whose reputations should be too sacred for any but the most solemn and logical consideration.

Among the Chinese, puerperal mortality is held, according to Dr. Jamieson, to rise as high as from 1 in 12 to 1 in 20—an alarming and scarcely credible statement ; yet Dr. Thin, lately of Shanghai, believes it to be true. Some statistics of the city of New York, recently published by Fordyce Barker, yield a puerperal mortality of 1 in 35, a terrible result ; and on the surely extravagant admission that a quarter or even half of the births were not registered, we have here a very high figure. Faye states the puerperal mortality of Prussia as 1 in 84 ; and that of Finland, according to Pippingskjöld, as 1 in 106 ; and that of Norway as 1 in 131. I found that in Edinburgh and Glasgow, in 1855, the mortality of married women within six weeks after delivery was 1 in 107 at least. From a large collection of data, and trying, however rudely, to get an approach to exactness, I estimated the mortality within four weeks after delivery as about 1 in 120.

Hervieux says there are places where for a long series of years this rate has not risen above 1 in 1000 ; but he must derive his information from some other planet than this, for certainly there is no such abode of the blest known among

the inhabitants of this earth. Le Fort estimates the rate as 1 in 212; but his figures and reasoning are such as to render this determination unworthy of any reliance, as has been sufficiently demonstrated. Farr has carefully estimated this rate, and arrived at the conclusion that it is 1 in 190. But however much we may be disposed to bow to his authority, we are bound to scrutinize his method; and on doing so, it turns out to be very unsatisfactory. He is dealing with a system of registration which is not compulsory; he seeks to verify the returns relied on by appeal to the returners, which is something like trying to correct an error by itself; he made no independent search for the deaths of the delivered women; he made no correction for twins, nor for still-births. On all these accounts I regard his result as being not only out of keeping with the best of the others, but as not especially reliable. The data of foreign countries which I have given may be very good for ought I know, but then I have no positive knowledge of the care or of the circumstances under which they were compiled; yet we have always been led to regard the Swedish and Prussian returns as very valuable.

In this state of matters I was not disposed to allow the point to remain unsettled for this country, and I recently undertook the somewhat onerous task of thoroughly searching official returns, with a view of getting a figure that could be relied on. The determination which I am about to give can be erroneous only in the way of making the rate too low.

I found that there were registered in Edinburgh and Glasgow, in 1869 and 1870, about 52,000 births, and I found that within twenty-eight days after delivery at least 1 in 139 of the mothers had died. Now, several mothers additional may have died, and their deaths have been elsewhere registered, they having left their original residences. These would slightly increase the rate if they were found; but the rate is too low for another reason—namely, that all births of dead children are omitted. Now this very serious omission of a large proportion of the most dangerous labours leads to this rate of 1 in 139 being far too low. How very far too low, we may to some extent conceive when I call to mind that, among Collins's 16,414 women

delivered, 164 died ; and of these 164, nearly one-half had dead children ! It may be said, then, as the result of this investigation—the most careful and complete, so far as I know—that at least 1 in 139 died ; and I add, for the reasons above given, and for others, that I have no doubt that at least 1 in 120 died. These terrible results, gentlemen, or something closely approximating, we must accept meantime, however forcibly they may demonstrate that marriage and childbearing are a fearful ordeal for a young woman to encounter.

My estimate, gentlemen, of this lamentable mortality of lying-in women is 1 in 120 within four weeks ; and it is useful to have a fixed period of four weeks for various reasons. But we must not allow ourselves to be misled into thinking that puerperal mortality is over in four weeks. You are well aware that many bad cases linger on beyond the month of four weeks, to die beyond the reach of these restricted statistics ; and that many others owe their deaths to puerperality, although the occurrence is later than four weeks after the labour. I have already mentioned that I have most carefully prepared statistics showing a mortality of at least 1 in 107 within six weeks after delivery. Further, I have statistics analysed which do, I believe, show that the mortality of puerperal women does not again fall to its ordinary level till a period not of weeks, but of months, after delivery. It would be a grand work for our young statisticians to show the wave of special mortality, beginning with conception and ending some months after delivery. Statistics have already shown the great rise of mortality, or the great wave of it that passes over the sex during the childbearing age. But we want much more than this, and especially the wave for the average individual pregnancy, labour, and lying-in.

I must conclude this already too long discussion by saying that I believe that in this country nearly 1 in every 100 women delivered at or near the full time dies in parturition, or before the puerperal state and its effects have passed over. This is, no doubt, an awful statement for women and for men. Whether it will deter them from marriage or not

when they come to know it I cannot say, for I have no analogy to guide me. The risk from railway accidents is comparatively a mere bagatelle, when taken in any point of view, and I have made no inquiry as to its influence in deterring from travel.

Even the fear that women may be deterred from marriage and childbearing must not deter us from unmasking the real extent of the dangers they encounter; but I must only spend a few words on puerperal morbidity. Besides dying at a rate of nearly 1 in 100, women have to encounter a vast amount of disease and suffering which does not end fatally. This has been called morbidity, in contradistinction to mortality. Miss Nightingale and Dr. Farr, besides having very favourable views of mothers' chances of survival and recovery, go a great deal further than this, and enunciate a doctrine to which it is difficult to believe they have ever given a moment's reflection. They regard ordinary women as having no need of long nursing after lying-in; for it is all over, say they, in a few days after retirement and delivery in the rude compartment of a hut. It is unnecessary to take up the time of any one of the most moderate experience in confinements and diseases of women among the poor or the rich, among the civilized or uncivilized, with a deliberate demonstration of the tragical injustice of their statement. I only refer to it here as it forms a contrast with the truth as to puerperal morbidity. This subject has been illustrated by many authors, among whom are Späth and Landau, who confine their researches to morbidity shortly after delivery. The latter, taking temperature as a criterion, estimates puerperal morbidity as affecting 1 in 6. His valuable experience was in an obstetric hospital, and it requires corroboration. Besides this, he takes no account of the many ulterior diseases coming on after so-called recovery.

Deaths during parturition or the puerperal state are often conveniently arranged in three sets:

1. Childbirth deaths.
2. Puerperal or metria deaths.
3. Accidental deaths.

A woman dying during post-partum hemorrhage undergoes a childbirth death; a woman dying of puerperal fever undergoes a puerperal or metria death; a woman accidentally poisoned by laudanum shortly after delivery undergoes an accidental death. In cases such as these the placing of the death in its class is easy, but there is a large number of cases regarding which there may be just difference of opinion as to which of these three groups should receive them: hence the classification as used in practice cannot be relied on as embodying a scientifically accurate statement of any point—a circumstance which, for the conduct of various important discussions, is much to be regretted.

But though this is so, there is unanimity in placing puerperal fever deaths in the second category, that of puerperal or metria deaths, and in giving it the horrid pre-eminence over all other causes of mortality in the three combined categories. For obstetricians and for the world, then, this is the subject of first importance in midwifery, and it has attracted a corresponding amount of attention, and never more than at present, and certainly never with so much advantage.

The oldest writer on puerperal fever, Willis, whose book was published two hundred years ago, propounded a theory of this disease which is remarkably like that now in vogue among the best pathologists. He regarded it as having some connexion with an uterine wound; but then he did not know the nature nor the anatomy of the uterine wound, and he did not think any of the other wounds or injuries of the lying-in woman important in the matter. He regarded the disease as a fermentation in the blood, but his notions as to fermentation, its causes and results, were imperfect in themselves, and extremely unlike ours. He attributed to fancied sulphureous particles somewhat of the importance and place that are now given to the bacteria of Mayrhofer, of Lister, and of Heiberg, or to the micrococci or globular bacteria, which Orth, and I believe Heiberg also, regard as holding the supremely baneful position among these noxious beings. Our new theories of

puerperal fever must be tolerated because, as philosophers, we delight to frame them ; and they have a certain utility which this is not the place to discuss. The new theories far surpass the old ones, which deserve more thorough displacement and rejection than the profession has yet awarded them. The new theories are based on an accumulation of facts whose collection is most creditable to modern science. These valuable facts have been the fruit of the ceasing to philosophize, and the struggling to observe and to experiment which are the characteristics of modern pathology. As in parturition, so in the puerperal state, the progress has arisen from discovering mechanism, although we do not speak of these advances in such terms. What are our discoveries in the anatomy of the lymphatics but the mechanism of puerperal fever or a part of it ? What are thrombosis and embolism ? What is the conveying and diffusion of bacteria, or of any septic poison ? What are our antiseptic precautions ? By statistics, by observation, by experiment we accumulate facts more or less pertinent to the subject, and we arrive at theories having a wider and more solid basis than those of our predecessors, who long and till recent times, misled by the *ignis fatuus* of an essential puerperal fever, were destined to make little real progress till they threw that notion aside and began working at the matter again according to better method.

No theory of this subject can be regarded as final or sure. But the time has come when obstetricians should try to leave off the use of the convenient term puerperal fever, because it embodies error. There is nothing essentially puerperal known in it ; nor is there anything of the nature of a fever, as that term is generally understood. A new name, already widely used, is to be found in the already comparatively old term, pyemia. This new name can be of only temporary utility, but that utility will be very great, and continue till advancing science displaces it by a better, as it should now displace puerperal or childbed fever. It will then have served its time by carrying the ideas of generations of practitioners away from the old, flimsy, and extensively erroneous speculations of the past to the more substantial of this day.

It is not to be supposed that pyemia is a term to be analysed into its component parts and held as implying purulent blood. That was once the meaning of pyemia, but it is not so now. The crude pathology of Piorry is already almost forgotten, and his term pyemia is used extensively among the best pathologists as a comprehensive word, identical with or including the septicemia and ichorrhemia of certain others. It sounds like an adoption of humoralist views, but in it there is as much of solidism as of humoralism, and there is in it vastly more of modern science than in the term puerperal fever.

Pyemia occurs in several forms, which are characterized each by more or less peculiar symptoms, but most distinctly by the pathological appearances discovered post-mortem. There is that most widely known when you have septic embola, and scattered abscesses caused by them, and perhaps otherwise also. There is that where you have inflammation of the peritoneum and other serous cavities, including the synovial and endocardial. There is that where the mucous membranes are chiefly affected—the muco-enteritic. And, lastly, there is that where the only results found after death are—alteration of the blood, enlargement of the spleen, the liver, and degenerations of their most important tissues, with similar degenerations in other organs. It is this last which, often rapidly fatal, was described by Helm, and is now often called acute septicemia. These are the cases which the superficial pathology of our young days described as having no post-mortem appearances at all. An autopsy in those days was made by any practitioner, occupied only a few minutes, and the observations made were of corresponding value. Now an autopsy is a matter understood to demand the labour for a long time, often for hours or even days, of an expert. On these fruitless necropsies, where no appearances were discovered and none supposed to be discoverable, was founded, as you will remember, an argument supposed to be of clenching potency in favour of the essential fever character of the disease. But I confess I have never been able to discover either the logic or the power of the demonstration.

Easily getting rid of this old argument, we come sharply into contact with a new difficulty. When I say that Weber, Bergmann, Billroth, Hüter, and Verneuil support the doctrine, that Olshausen holds it an open question, and that Sanderson, in his essay on the "Infective Product of Inflammation," demonstrates truths which seem at least to favour its pretensions, you will see that the matter has already occupied great minds. The doctrine is antithetical to the essential fever notion, for it states that pyemia, or so-called puerperal fever, does not essentially differ from ordinary inflammatory fever, such as is called healthy, except in degree, and that the modes of induction of these feverish states are identical, or nearly so. From the slightest pyrogenous effect or merest evidence of morbidity, as discovered by the thermometer, up to the most rapid of Helm's cases of acute septicemia, we have one disease in different degrees or forms, all depending on a chemical poison of Schmiedeberg and Panum, or on the bacterium of Mayrhofer, of Lister, of Klebs, of Waldeyer, of Helberg, and of Orth, whether this bacterium be the poison, or only its carrier. That there are weighty reasons for entertaining this view must be admitted, and among them not the least is the wonderful results of the antiseptic system of treatment, as not only preventing pyemia, but as preventing ordinary inflammatory fever. But practitioners of my own age, or greater, will find it difficult to get rid of, or controvert, the *primâ facie* evidence in favour of the old views afforded by the great array of facts and ideas which forms the basis of our daily reasonings in the guidance of practice in healthy and unhealthy inflammations, and which furnish a set of arguments which have been well stated by a reviewer in a late number of our medical quarterly journal.

The disuse of the term puerperal fever, and the replacement of it by puerperal pyemia, is a change which has already been carried out by many of our best obstetric authors. The old designation is so impregnated with erroneous and misleading theory, that it cannot, within a reasonable time, be purified, and will probably be most advantageously subjected to destructive cremation. Fordyce Barker, a recent American author of great intelligence, still upholds the old banner—

“an essential fever peculiar to puerperal women, as much a distinct disease as typhus or typhoid.” He well knows how pathologists believe they have torn this view into tatters, and he ought to have given us good evidence of its being reparable, if not actually rehabilitated, but he does not even attempt the difficult task. When we are asked for evidence as to the specific characters of typhus or typhoid, we can easily produce them, and defy the further destructive analysis of these diseases. It would be a waste of time to go over the special history of the causes, progress, and results of these diseases. They are well known, clear, and convincing to all. For puerperal fever, we have no such characters—no such evidence. All the evidence brings the disease into the closest alliance or identity with surgical pyemia. The grand modern history of pyemia is, in fact, at every step of its progress, the history of the elucidation of puerperal pyemia, or of so-called childbed or puerperal fever.

One error is sure to bring another in its train : and so we have the widely prevalent belief that this disease is like cholera, or small-pox, or typhus, in occurring sporadically, but chiefly epidemically. Here it must be observed that many authors use the word epidemic carelessly, or as synonymous with endemic ; a common error, which should never be committed. But, knowing this, we find them almost universally believing in real epidemics of puerperal fever, describing them as sweeping over a country or devastating a continent. It is well known, and indeed needs no further proof, that the disease has often the appearance of being endemic in an hospital, that it attaches itself to and follows certain individuals in their practices ; but I have not been able to find anything worthy of the name of evidence to prove its epidemic prevalence at any time or in any large district. You are all, no doubt, familiar with the long descriptions and marvellous statistical compilations adduced as evidence of this doctrine by our best writers, especially by medical historians, among whom Hirsch is pre-eminent. But when these statistics are subjected to scrutiny, they are all found wanting, as may be made plain by one example, and the examples are all from old times. We have few epidemics

described in recent times, and these few do not produce respect for the doctrine implied in their description. Yet though there are few descriptions now, there is still everywhere the erroneous belief. Epidemics are described as having occurred in Edinburgh in 1772, 1814, 1825, 1833. But it is mere assertion. There is not a tittle of proof that the disease was not as prevalent in every year as in the years of the so-called epidemics. When a physician, struck with awe by a few cases, writes a description of them, down it goes in the statistical tables as an epidemic ; and the year of it is not always that of the cases, but sometimes that of the publication of the pamphlet or book. When the horrid mortality rises in an hospital, from overcrowding or other causes, down it goes again as an epidemic ; and with this supply of burlesque evidence the manufacture of epidemics never ceases. Registration arrangements are not required to show the epidemic character of cholera, or of small-pox, or of other fevers ; and, when we do get the valued registration statistics, we get the proof in proper form. But if puerperal fever is to be shown to be ever epidemic, it must be by regular modern registration statistics. The prevalence of it is happily never very great, comparatively speaking, and, again, it is never extensively or long absent ; and, when we appeal to such statistics of metria as are accessible, we do not get proof of epidemic character. We find it always present, in every county, in every community. It is easy to get proof of the epidemic characters of fevers, but not of puerperal fever. He who studies this point will find metria to vary in its ravages as pneumonia does ; he will find cholera or scarlatina varying in their ravages according to a quite different law.

As the disease is erroneously believed to be a fever and to occur in epidemics, so we have a corresponding erroneous theory of its origin or causation. Many authors delight to speak of cosmic or of telluric influences or of miasma as producing the disease, and such subjects are favourites with a certain class of minds which find it most agreeable to enter at great length upon those topics of which they know very little or even nothing. For such there

should be a puerperal Zadkiel. It is very difficult to find any evidence for the existence of a miasma even in the air of a pestilential hospital, for puerperal pyemia prevails in such a manner as is scarcely reconcilable with the miasma hypothesis, and, on the whole, easily reconcilable with more or less direct communication with diseased neighbours, as Veit has ably shown. Among the circumstances of prevalence to which I allude are the comparative immunity of women brought into the hospital already delivered, the special liability of *primiparæ*, the special liability of those who have tedious and difficult labours.

Again, as the disease is believed to be a real or essential fever, so, of course, it is believed to be contagious and infectious, or both—whatever these terms may mean. In recent times, this mode of communication has come to be regarded as so certain and yet so subtle and mysterious that many teachers and a great body of practitioners have been terrified out of their senses by it. One cries out that the obstetrician must not wear gloves, and it would be just as rational to say he must not wear clothes. Perhaps he might be permitted to paint, and go about his practice, as the ancient Britons fought. Many say that the practitioner who has a case of puerperal fever must give up his practice and go through various processes, and not return to his avocations for a period varying from a fortnight to six weeks. Others, on this point speaking logically, go further, and say the accoucheur should give up his practice, not only if he has on hand a case of puerperal fever, but of many other contagious diseases, such as scarlet-fever, typhus, small-pox, measles, erysipelas, fetid abscess, &c. Of the many who propound or teach such doctrines, I have never known one who practised them, and I cannot say their feelings on reflection are to be envied. If such be good doctrines, they are, of course, equally good for physicians and surgeons as for obstetricians, but the poor obstetrician is laden with restrictive burdens which his medical and surgical brethren do not recognise or touch with one of their fingers. Yet, the old proverb tells here, that what is sauce for the goose is sauce for the gander, and accordingly physicians and surgeons must follow the rules they inculcate on

the accoucheur. In truth, these extreme practical doctrines of contagion are absurd, for they render all practice, whether medical, surgical, or obstetrical, an impossibility, or at least reduce the number of patients cared for at a time to one, which amounts to the same thing. In this matter much error and evil are, I believe, introduced by confusing the duties of the practitioner with those of the nurse, two quite different and almost, if not altogether, incompatible occupations. A practitioner must always, in such circumstances as we are now considering, carefully eschew undertaking the functions of a nurse, for, if he do, he must submit himself to the code of rules that regulates the conduct of nurses. If, avoiding a nurse's duties, a medical man of any kind cannot make himself medically clean in hands and person and dress, all kinds of medical practice as at present carried on are impossible with due regard to the safety of patients. Everyone who knows the safety of actual medical practice must see that such views of contagion end in absurdity. But it is not, despite all this, to be supposed that practitioners are not bound by the most solemn considerations to take most scrupulous care against being disseminators of disease ; and there is no disease with which they deal, where such care is more imperative on them than puerperal pyemia. The puerperal woman presents in her contused, lacerated, and inevitably wounded passages the most favourable nidus for the reception of morbid material ; and the woman suffering from puerperal pyemia in any of its forms, and patient suffering from some of the allied diseases, present this morbid material in its subtlest and most potent essence. A well-demonstrated communicability arises from this source. No other has been demonstrated, but it is possible that in an ill managed hospital there may be some other. For the existence of another source, several of the best recent authors offer slight evidence ; but, on the other hand, its existence is rendered very doubtful by the alleged absence of pyemia in those surgical hospitals or parts of hospitals where the antiseptic treatment of Lister is properly carried out.

Another result of this extravagant and superstitious dread of contagion is what I deliberately call the slandering of our noblest and most useful institutions—hospitals—and in that

word I include all hospitals for the sick, not those for lying-in women only. Although it is against the latter that most of the foolish talk is directed, it is vain to suppose that they alone suffer. If one kind of infirmary be indefensible, so are all kinds ; they must stand or fall together. The laws of pathology are not varied in nature with a view to the misfortunes specially of lying-in women. No doubt, the slandering is done with an excellent intention, under a good motive, but it is none the less what it is called, censuring injuriously and falsely, or without sufficient evidence. There have been, and there may be now, maternities which are justly calumniated as injurious, but that fact is no excuse for calumniating all. After abundant evidence has been adduced to show the directly and indirectly erroneous character of Le Fort's statement, that while the mortality of hospitals is 1 in 29, that in private practice is 1 in 212, a recent lecturer on pyemia repeats it as if it were uncontested, and weakly appeals to authority on a point capable of scientific demonstration. We have reliable and large statistics to show what a moderately good hospital is, and we have no thoroughly reliable evidence that better results are anywhere obtained, whether within an hospital or in private practice. Among the good, I place the Rotunda of Dublin, the reports of whose recent condition you may have seen from the pen of Dr. George Johnston, its present master. So great is this superstitious dread of hospitals and reliance on imperfect statistics, that one eminent author believes he has made out that amputation of the fore-arm performed upon a poor man in his cottage is thirty times less fatal than if it were performed in an hospital. The paradox is not to be received because its basis is inadequate; and considering whence come most of our hospital patients, I wish we had from this author some theory of the healing virtues of the concentrated and various filth of a highland bothy or cottage, or of a den in the Edinburgh Cowgate, or the London Ratcliff Highway, accompanied as it often is, by every abomination physical and moral.

As hospitals are in this facile manner made out to be bad, so, of course, large hospitals are worst, and statistics are again appealed to in support of this view. Were it not that a recent lecturer on pyemia repeats this statement, I would not here

allude to it, for it has been shown to be groundless by demonstrations as good as can well be imagined, but which seem not to have reached the eyes or mind of this eminent surgeon. Siebold believed that lying-in hospitals were so useful that shutting them up would bring far more serious evils than an occasional outbreak of puerperal fever. Whatever soundness there may be in Siebold's judgment, I prefer, with Steele, to adopt a different view of maternities, and to look forward to the time when there will be no endemics of puerperal pyemia, but only sporadic, or what are called autogenetic cases.

Other errors connected with the old and still prevalent opinions regarding puerperal fever, though worthy of comment, must be passed over ; but one, from its importance, demands notice. It is, that this disease is a kind of cholera, or a kind of typhus, or a kind of scarlatina, or owns the same or similar causes. In this country, it is almost exclusively the identity with scarlatina that has found supporters. But at home and abroad the doctrine has, in some form or other, been extensively entertained. It is to be carefully distinguished from that reasonable view of Pouteau, Alison, Sidey, Nunneley, and Tilbury Fox, that the disease has close alliance with erysipelas, and, I might add, with the diffuse inflammation of Duncan, a view which has been partially adopted and signally illustrated by Virchow in his now celebrated paper on Diffuse Puerperal Parametritis. Scarlatina is a source of terrible danger to lying-in women, and scarlatinoid rashes are seen in some of the worst cases of septicemia ; and herein probably lies the attractiveness of the theory. But, unluckily for its supporters, and especially for the most recent, the theory has been disposed of by the researches of Hirsch and of Veit, who, by statistics of the comparative prevalence of scarlatina and of puerperal fever at different times and at the same time, have shown that there is no relation between the two. This argument against the theory is far stronger than any in favour of it, and must meantime be held as conclusive. It had been urged by these authors and by Spath before the *Lancet* did the good service of bringing Farr into the field on the same side.

Every change in doctrine or in name does not necessarily indicate progress ; often, indeed, it indicates retrogress. Such unfortunate changes arise more frequently from error in philosophizing than from error in observing. Among such there is one in the history of our present subject. It has by some pathologists been proposed, not only to continue the name puerperal fever with all its adherent errors, but to go far towards introducing like errors into surgery by describing the allied diseases there as surgical fever. Had there not been the erroneous use of the word fever in childbed diseases, there would undoubtedly have been one hindrance less of the general acceptance of modern views. Progress in surgical pathology runs no risk of being now impeded by the false name, surgical fever ; and its adoption will certainly not do any good. By adopting, instead of puerperal or childbed fever, the term puerperal pyemia, or some similar one, we, by the mere use of words, enforce the argument for a great medical generalization, making the gains of surgical and obstetrical science mutually beneficial.

It must not be supposed that there is in the mere change of a name any real progress, however much such change may foster right views. Nor is this change of name to be held as even tantamount to a change of theory, from a false to a true one. The present state of our knowledge is not such as to justify a sense of great security in any theory. Yet theories are very attractive, nay, useful, and the tendency to frame them, whether prematurely or not, is in vain repressed. All the more ought we to maintain our minds in an unprejudiced attitude, ready to throw away the worse and cling to the better. Willis, who introduced the name *febris puerperarum* two hundred years ago, held that it was the result of sulphurous particles and fermentation. This has a faint resemblance to the new pyemic theory, with its bacteria or micrococci, its septic and infective materials ; but Willis's theory, and every recent modification of it, is a mere shadow compared with the pyemic theory. The former can scarcely be said to explain or embrace any of the chief details of the subject, while the latter explains and embraces a vast number, is incompatible with none, and is the most promising road to still

further explanation and generalization. It is the last philosophic production of a vast array of modern observations and inquiries. It helps to increase the distance between us and the mere philosophizers, and to join us with the advanced guard of modern medical investigators, whose weapons are observation and experiment, not learned talk, however clever. When the physicist finds a theory of light propounded by the greatest of his kind to be inconsistent with his more advanced researches, he not only adopts a new one, but deserts the old nomenclature connected with the misleading hypothesis.

Many researches of different kinds have contributed, and are contributing, to converge scientific light on this greatest of practical, obstetrical subjects; but scarcely one of them can be regarded as being even yet completed, while some are only well begun. In drawing to a conclusion, it will be well to take a glance at these various investigations, with which we may class some more general discussions, such as that of Spiegelberg, on this topic.

Van Swieten, Willis, and many old authors on puerperal fever, regarded it as a wound-fever, and Eisenmann's well known work on the subject, published in 1837, is called "Wound-Fever and Childbed-Fever." The wound which these, and even most recent authors, have in view, is that produced by the separation of the placenta; but it is now well known, and has been often found clinically exemplified, that the disease may begin in a contusion or laceration of any part of the genital canal. Many of you have recognised the beginning of a fatal disease in a diphtheritic state of a slight recent perineal laceration, with surrounding redness and boggy swelling. I have already alluded to the recent advances of our knowledge of the anatomy of the placental wound, but already we know where to look for much more light on this subject. The anatomy of the lymphatics, to which recently Recklinghausen, Klein, Thin, and many others have contributed, is not yet completed for the uterus. We all know the fine-looking and distinct, but very unsatisfactory drawings of uterine lymphatics by Moreau; but we do not yet really know their actual anatomy, though very much progress has been made by the anatomical investigations of

Lindgren, Fridolin, and especially of Leopold. The completion of this work will be an addition to the theory of puerperal pyemia.

Following the as yet indefinite notions of a wound-fever, came a further true advance from Boyer, Legallois, Cruveilhier, Tonellè, Dugès, and Simpson, who combined to demonstrate the identity of what would now be called the rough morbid anatomy of patients dying after surgical and after obstetrical wounds.

Then came a grand piece of progress, consisting in the discovery and descriptions of phlebitis and lymphangitis, which we owe to Dance, Duplay, Cruveilhier, Robert Lee, Hecker, and Buhl.

We now reach our own times, and have a still grander progress of our knowledge to record, in the discovery of thrombosis and embolism by Virchow, Kirkes, Cohnheim, Buhl, and many others.

After these come researches whose bearings on this subject are certainly very important, but which are, in many respects, as yet immature and incomplete. We allude to the investigations as to the potency of septic poisons, connected with the names of Davain, Panum, Kehrer, Thin, and many others; the great and actively progressing researches as to the production, diffusion, and influence of bacteria of various kinds, by Lister, Klebs, Waldeyer, Sanderson, Billroth, Winge, Heiberg, Orth, and many others; the new researches of Sanderson on the infective product of all acute suppurative inflammations; researches also into the distinctive characters of the noxious or septic, and the innocuous bacteria.

Besides all these, many valuable results have been elicited from the analysis of experience in hospital and in private practice. In this way the influence of age has been ascertained, and especially of immaturity and of advanced life; so also the baneful influence of primiparity and of excessive childbearing, and of twin-bearing; so also the baneful influence of severe and of complicated labour; so also the bearings of the duration of labour; so also the influence of earliness or lateness of attack after delivery; so also the

baneful influence of inclemency of season ; so also the dangers attending hospitals and the dangers of communications between the sick and the healthy.

But all of these researches, whether finished or still imperfect, do not, when combined, complete our modern view of this great subject. It is a subject in practical medicine, and we are practitioners. The great object of our work is to prevent or to remove the disease in our patients, and we have to inquire what fruits our knowledge produces for the comfort or healing of the sick.

Many remedies for puerperal pyemia have been proposed, and their successful application loudly proclaimed and widely believed. Doulcet was even rewarded by the French Government for his discovery of the curability of this disease by ipecacuanha. In our own day new cures do not fail to make their appearance, and the advanced knowledge of our times would lead us to expect that they should be more rational, as the phrase is. But who is there of weight in the profession now, who believes in any cure or in any system of specific treatment? All have been found wanting. Yet the wise physician of this formidable disease does not despair of guiding his patient through it, although he well knows its very dangerous character. Experience has shown him the utility of several means for relieving sufferings ; and the favourable progress of a case may be encouraged, though not secured, by those invaluable directions which he may give as to diet and stimulants, as well as to more direct medicinal treatment of the genital passage, of the skin, of the bowels, and of the system generally.

But in this disease the physician has long been saying, not that prevention is better than cure, but that prophylaxis or prevention is to be chiefly looked after, and not cure. Great credit is due to Semmelweiss for the good he has done, especially to hospital patients, by his enlightened zeal in this cause ; but the records of hospital practice sufficiently show that much more has yet to be accomplished. Prophylaxis is still farther to be carried out by attention to stop injurious communication between the sick and healthy, by disinfection, and by architectural arrangement, subjects which

are all at present receiving much attention from the profession.

In the course of my remarks I have repeatedly referred to scientific researches, as to the poison producing pyemia, and as to the effects of its concentration, and as to the connexion of this poison with the presence and diffusion of bacteria. These researches have been carried on mostly by observations and experiments on the lower animals, and of their very great value there can be but one opinion. But there is a variety of circumstances which seems to indicate that the lower animals are not subject to exactly the same laws in these matters as man is, and certainly there must be great caution exercised in arguing in human pathology from the analogy of the lower animals. The most important of the researches referred to, however—those of Lister and his followers—have been mainly carried out in man, and consist, in a great degree, in the attainment of results in practice equally wonderful and valuable—results that can, so far as we at present know, be attained in no other way. These results go far to justify the belief that pyemia is a septic disease, and that puerperal pyemia may be almost, if not altogether, prevented by the application to delivery of a practice based on antiseptic principles. We know how much has already been, and is, I am happy to say, daily done with success in this direction. But the rules of Semmelweiss, or any other washing of the hands, however carefully conducted, do not constitute treatment according to the manner of Lister. Such imperfect antiseptic precautions, by use of antiseptic gauze and otherwise, I have used with apparent advantage; but we have yet a long way to go, in order to secure complete antiseptic delivery and subsequent treatment. To reach this desirable object, the efforts of several good minds are, I know, directed, both at home and abroad; and some recent unpublished cases of successful antiseptic treatment of wounds of the penis, where periodical discharges of urine have to be permitted, supply a sketch in miniature of plans that might be applied to ordinary confinements. To say more about them I have no right; but I conclude by calling upon you to give your best aid to forward the grand cause of the increased safety of lying-in women.

General Correspondence.

DR. HALL DAVIS'S SPECULUM.

(To the Editor of "The Obstetrical Journal.")

SIR,—In the July number of your Journal I noticed a criticism upon my tapering speculum by Dr. Charles Clay. In reply I may state that the instrument in question which I exhibited at the Obstetrical Society is so far a novelty that no such form of speculum was to be met with in the museum of the Obstetrical Conversazione held in London in 1866, which museum was a gathering from the chief cities of Europe. Nor, again, was there a specimen of such a speculum in the museum of the British Medical Association held at King's College, London, last August.

Previously to satisfying myself on the point, I had spoken to different instrument makers, and they agreed that such a form of speculum did not exist in the trade. Under these circumstances, and often having felt the want of such a speculum, I gave Messrs. Arnold the design and order, which they executed to my satisfaction, and which for their own benefit they have registered. I attach importance to the tapering form of the speculum as much as, if not more than, to its metallic composition. Certain chemical reagents, I am quite aware, act upon the gilt surface and upon the nickel plating—so they do on our valvular specula; others do not. Among the former are nitric acid and pernitrate of mercury; but we do not frequently employ these agents. Among the latter which I find do not affect the materials of the metallic speculum are nitrate of silver and chromic acid. Porcelain might be used as the material for the tapering tubular speculum for the few cases in which the above stronger reagents are indicated, and it would not be so fragile as a Ferguson's speculum.

I am, &c.

J. HALL DAVIS, M.D.

July 20th, 1874.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

SEPTEMBER, 1874.

THE BRITISH MEDICAL ASSOCIATION AND OBSTETRIC MEDICINE.

IF we growl when angry, we should purr when pleased. Last year when commenting upon the annual meeting of the British Medical Association, we had occasion to complain, not only of the indifference to the claims of Obstetric medicine displayed by the Association, but of the want of appreciation shown by obstetricians of the great power which so large a medical combination offered them. This year, however, we have every reason to congratulate ourselves upon the satisfactory manner in which our great branch of the profession has been represented. The President, Dr. Copeman, is an obstetrician of considerable repute, he holds the office of Consulting Accoucheur to the Norwich Lying-in Charity, and is the author of many excellent obstetric and gynecological papers. This year also we have had what we should have every year—an address in Obstetric medicine, and the Council were fortunate in obtaining the consent of one of our most accomplished obstetricians to perform this important task. Dr. Matthews Duncan in the choice of his subject made a happy selection. Pyemia, as Dr. Copeman truly said in his presidential address, “is a very interesting subject to us all, and, from its apparent analogy to certain puerperal conditions, it is especially so to general practitioners, whose time is always much occupied with obstetric engagements, where failure is most distressing and often detrimental to professional success in life.” Dr. Matthews Duncan probably astonished some of his hearers when he showed by figures, whose accuracy it would be difficult to disprove, the perils of maternity. It was well to face the

matter boldly, for by fully displaying the dangers of child-birth the author did the most he could in obtaining the object of his address, viz., to forward the grand cause of the increased safety of lying-in women.

During the past year the Parliamentary Bills Committee has, besides other important work, been engaged in considering the scheme of the Obstetrical Society of London for regulating the education and examination of midwives who are now practising among the poor of this country, without any prior tests of their knowledge and without any provision for regulating or supervising their proceedings. This question is still under consideration, and is rapidly ripening for legislation. The Obstetric Section was, as it always has been, well attended, and many papers of interest were read and discussed, Abstracts of which we hope to give our readers in a future number. Unfortunately owing to serious illness the President, Dr. Fleetwood Churchill, was unable to appear, and Dr. Playfair, one of the Vice-Presidents, was also unavoidably absent. Dr. Steele of Liverpool, the other Vice-President however, presided most ably, and was punctually and persistently at his post. This annual meeting of the Obstetric Section of the British Medical Association must now be looked upon as the supreme imperial court of our branch. At it meet representatives from the Obstetrical Societies of London, Edinburgh, and Dublin, and once a year at least, an opportunity is thus afforded us of having comprehensively considered any subject affecting Obstetric Science or polity. Conclusions arrived at in this way would undoubtedly claim the sympathy of the great bulk of the members of the Association, and should it be considered necessary for us to take action upon any point, we should be certain to be assisted in attaining our aim by their mature advice and unquestionable power. The influence which the Association can bring to bear upon Medical Corporations and the Government, may be well observed in the progress which State medicine has made under its fostering care. We shall be blind to our own interests if we do not likewise seek its support, and endeavour to the utmost of our ability to share its deliberations. It must be admitted that this

is not sufficiently done at present. We have still occasionally to remind the Committee of Council of our existence, and this unpleasant task will again and again have to be repeated, if we do not endeavour to have elected amongst its number energetic and prominent representatives of Obstetric medicine.

Abstracts of Societies' Proceedings.

BRITISH MEDICAL ASSOCIATION.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE OBSTETRIC SECTION,

*At the Annual Meeting of the British Medical Association, in
Norwich, August, 1874.*

By FLEETWOOD CHURCHILL, M.D.

President of the Section.*

GENTLEMEN,—On taking this chair, my first duty and my greatest pleasure is to express my gratitude for the honour conferred upon me by the British Medical Association ; and the more so, because I am aware that the compliment includes the Dublin Obstetrical School, with which I have been so long connected. I thank you very heartily, gentlemen, for the great honour you have done me.

In casting about for a subject with which to occupy you here for a few minutes, as I have nothing worthy of my own, I have determined to ask your attention to what I may call an experiment, carried on by my friend Dr. George Johnston, for the last five years in the Rotunda Lying-in Hospital, of which he is the careful and able Master. His annual reports you will find in the *Dublin Journal of Medical Science* for February, 1870, December, 1870, Dec. 1871, Dec. 1872, Dec. 1873 ; and I can state from personal knowledge, not only that these reports are written by him, but that every case is entered in the case-books, and all the statistical tables, drawn up by his own hand. You will find very much in these reports that, in my judgment, is of extreme value, but time would not allow me to draw your attention to more than one point, viz., the sanitary condition of the hospital.

* In the absence of Dr. Churchill, the address was read by Dr. Steele, Vice-President of the Section.

You are doubtless familiar with the views put forth, some years ago, by our lamented friend Sir J. Simpson, and since maintained by others of no small weight and authority. It was asserted, you know, that large hospitals were of necessity unhealthy, and that this conclusion as to the state of general or surgical hospitals was, *à fortiori*, true of large lying-in hospitals. We were told that epidemics of puerperal fever originated in these lying-in hospitals; that they were the special *habitats* of puerperal fever, which clung to them, or to certain of their wards; that their atmosphere is a permanent miasm, or malaria, to which the special name of "hospitalism" has been given; and, lastly, that "by continuing the system of large lying-in hospitals, we are causing the death, by zymotic metria, of a number of patients, for one that would occur in small hospitals or in isolation."

It would be quite foreign to my intention to reopen this question now; I allude to these statements merely to show the gravity of the inquiry, and the interest of the experiment. I intend to limit my observations to one point, viz., whether this malarious unhealthy condition is essential to large hospitals because they are large. I do not question that a large hospital, obstetrical or surgical, carelessly managed, with insufficient sanitary precautions, may be a "fever-nest," a "focus of disease," and give rise to or intensify zymotic diseases—fever, pyemia, septicemia.

It is quite true, also, that our earliest records of epidemics of puerperal fever are in connexion with lying-in hospitals; but whether this arose from there being few writers except those connected with the hospitals, or because the epidemic really originated there, may be open to question. We shall not be very far wrong in assuming that the laws of health, as applied to hospitals, were then as little observed as in private life. Nor do I intend to enter upon the comparative mortality in small hospitals, or among those confined at home, even were our statistics more extensive and accurate than they are at present. I repeat, that I shall limit my inquiry to one point, viz., whether there is necessarily such an atmospheric condition in a large hospital as that it must be a permanent source of zymotic disease to patients, either by originating epidemics of puerperal fever, or by affording congenial materials for an epidemic when the malarious influence is introduced *ab extra*.

If the former were the case, we should expect, I think, that whenever the "hospitalism" reaches a certain height, an epidemic of puerperal fever must break out among the inmates, and either be limited to the hospital, or be recognised as spreading thence to the neighbourhood.

Again, if a large hospital necessarily accumulated combustible materials, waiting to be ignited from without, there could scarcely be a zymotic epidemic outside without its spreading in the hospital so strongly predisposed for its reception.

Now, I hope to be able to show you, from the records kept and published by Dr. George Johnston, that in the Rotunda Hospital, for

the last five years, no such results have been observed ; that, although deaths from puerperal fever have occurred, there has been no epidemic originating within the hospital or imported from without ; and that the sequence of the cases affords no support to the theory, that infection clings persistently to the hospital at large, or to certain wards in particular. But in order to render what I have to say more intelligible, you must allow me to describe the relations of the wards to each other.

The hospital consists of a large central building and (on the left of the spectator) a smaller one, at seventy feet distance, with no direct communication. Nine wards are set apart for confinements, eight in the large building, and one in the smaller. "There are four large wards on each floor of the main building, with two smaller ones opening from them, holding two beds, and used for pay patients, or to receive any patient attacked by zymotic disease. The large wards on the upper story are numbered 1, 2, 3, and 4 respectively ; Nos. 1 and 2 being opposite to each other at the west end, while Nos. 3 and 4 occupy a similar position at the east end, and each opens on a wide corridor, running east and west 133 feet, with large windows at either end, the sashes of which are constantly more or less open. The Ward No. 1, at the west end, and on the south side of the corridor, is separated from that on the east (No. 4) by a space of at least 35 feet, occupied by the chapel ; those on the northern side are separated from each other by a store-room fully twenty feet in width, having a large window, which, with the door, is always open, and the entrance doors to each of the wards, on each side of the corridor, are about sixty feet from each other. The Wards Nos. 5, 6, 7, and 8, on the lower corridor, are immediately underneath those we have been describing, and are similarly circumstanced, with the exception of the wards on the northern side, which are separated by a wide staircase, with a large Venetian window, which is seldom closed. On the south side, as an upper storey, the chapel occupies the intervening space.

"The two wards in the auxiliary building consist of two rooms each, one with a southern, the other with a northern aspect, and are connected with a door, which is always open. The wards on the first floor are numbered 12 ; those on the second floor No. 11." These last since 1869, have been appropriated to cases of uterine disease, and therefore are outside our present consideration.

"Each of the large wards contains seven beds, one of which is occupied by the nurse or a midwife-pupil ; but we have seldom more than four of the others occupied by labour-patients, unless when many are coming in, and then four may be taken into the ward, so that, as each room has a cubic space of thirty-four by twenty-four feet in height each patient has on an average 2000 cubic feet of air ; and when I mention that thorough ventilation is kept up, and extreme cleanliness observed, not only as regards the ward itself, but also in strict attention to the person of the patient, the atmosphere is quite free from any impure

air, and in fact, I may say that such a thing as a 'loaded state of the atmosphere' does not exist."

I have quoted this description of the hospital from Dr. Johnston's First Report ; and having been over all the hospital many times in each year, though having no official connexion with it, I can bear personal testimony to the truth of the latter paragraphs. Nothing could be cleaner than both the patients and the wards, and I should consider it a decided improvement if the chambers of many of our private patients were as free from sick odours.

So much for the hospital itself. As you see, it is large enough to be open to the objections which have been made against such institutions. We shall now examine whether the experience of the last five years confirms these objections or not. I do not for a moment suppose that five years' experience is sufficient to decide the question for ever, but at least it is a large contribution towards forming a sound judgment, and it must stand for what it is worth. At the risk of being tedious, I must repeat, that the question I wish to bring before you is, not the comparative advantages or disadvantages of large and small hospitals, but whether the former, *i.e.*, the large hospitals, are necessarily, and because they are large, "*foci* of zymotic disease," "*habitats* of puerperal fever," "fever-nests," etc., as they have been called.

What, therefore, we want to ascertain from these five annual reports, is the amount of evidence they afford of an hospital malaria, or miasm, or whatever we may choose to call it, having originated an epidemic of puerperal fever, or of having intensified the severity of one introduced *ab extra* ; and secondly, whether, in case of the introduction of any other zymotic disease, it has been so intensified as to give it the character of an epidemic. It may facilitate matters if I mention that, during the last five years, there has been no epidemic of puerperal fever outside the hospital, but that there have been very severe epidemics of small-pox, scarlatina, and typhoid fever.

1. I may as well say at once that the hospital miasm has not originated an epidemic of puerperal fever, inasmuch as no such disease has prevailed epidemically there within the period specified. No doubt there have been cases of puerperal fever in the hospital ; but if we find no morbid sequence in the cases, and that no second case occurred in the same ward, or in the next bed, within a reasonable interval, should we be justified, do you think, in regarding malaria as a very influential agent? Certainly, if one case were immediately followed by several others in the same ward, or in the next, we might fairly come to this conclusion, but scarcely, unless under these conditions.

In the first Report (1869), in 1159 deliveries, there were 12 deaths from what may be called zymotic disease. Now let us look at the sequence of their occurrence, and the wards in which they occurred.

No. 1.	Nov. 5th, 1869, in Ward 7	.....	Lower floor.
„ 2.	Nov. 19th,	„ 11	..... Auxiliary building.
„ 3.	Dec. 14th,	„ 7	..... Lower floor.
„ 4.	Jan. 1st, 1870	„ 12	..... Auxiliary building.
„ 5.	Feb. 24th,	„ 1	..... Upper floor.
„ 6.	April 24th,	„ 5	..... Lower floor.
„ 7.	July 28th,	„ 3	..... Upper floor.
„ 8.	Sept. 11th,	„ 3 „
„ 9.	Oct. 12th,	„ 7	..... Lower floor.
„ 10.	Oct. 13th,	„ 12	..... Auxiliary building.
„ 11.	Nov. 1st,	„ 2	..... Upper floor.
„ 12.	Nov. 4th,	„ 7 „

Now, you will remark that only two deaths occurred in the same wards twice—viz., in wards 3 and 12. But between those in Ward 3, forty-five days intervened and many deliveries; between those in Ward 12, ten months and many deliveries. If the atmosphere of the wards had been unhealthy, how could the intermediate deliveries have escaped?

In the second Report (1870) there are recorded 1087, and six deaths from puerperal fever.

No. 1.	Oct. 28th, 1869, in Ward 3	.....	Upper floor.
„ 2.	Jan. 2nd, 1870,	„ 12	..... Auxiliary building.
„ 3.	Mar. 3rd,	„ 4	..... Upper floor.
„ 4.	May 8th,	„ 12	..... Auxiliary building.
„ 5.	Sept. 5th,	„ 5	..... Lower floor.
„ 6.	Oct. 3rd,	„ 8 „

Thus there were four months between the only deaths which occurred in the same ward.

In the third Report (1871), we find more deaths from zymotic disease than in any of the former ones: they amount to 21 in 1161 deliveries.

No. 1.	Nov. 9th, 1870, in Ward 1	.....	Upper floor (admitted with typhoid).
„ 2.	Nov. 10th,	„ 6	..... Lower floor.
„ 3.	Nov. 16th,	„ 2	..... Upper floor.
„ 4.	Nov. 30th,	„ 4 „
„ 5.	Dec. 16th,	„ 3 „
„ 6.	Dec. 19th,	„ 4 „
„ 7.	Dec. 21st,	„ 5	..... Lower floor.
„ 8.	Jan. 19th, 1871	„ 8 „
„ 9.	„	„ 12	..... Auxiliary.
„ 10.	March 6th.	„ 2	..... Upper floor.
„ 11.	March 25	„ 3 „
„ 12.	„	„ 5	..... Lower floor.
„ 13.	April,	„ 7 „

No. 14.	May 14th, 1871, in Ward 1	.....	Upper floor.
„ 15.	June 26th,	„ 2 „
„ 16.	June 11th,	„ 3 „
„ 17.	July 5th,	„ 2 „
„ 18.	July 12,	„ 4 „
„ 19.	„	„ 6	..... Lower floor.
„ 20.	August,	„ 7 „
„ 21.	October,	„ 8 „

Now let us take the ward-history, abridged from Dr. Johnston.

“ One hundred and twenty-two deliveries took place in No. 1 Ward in the year, out of which there were two deaths. The first was from a zymotic cause, having been admitted with low typhoid fever and diarrhea, November 17th, 1870; the second, also zymotic, occurred on May 14, 1871, after an interval of six months, during which thirteen sets of patients were delivered.

“ In No. 2 Ward, 124 deliveries took place in the year, and four deaths, all of a zymotic character. The first in November, was admitted with acute pneumonia; peritonitis supervened. The next, a case of scarlatina, did not occur till March 6th, after an interval of nearly four months, during which time there were eight sets of patients delivered, and the same bed occupied on eight occasions. The third, an irrupta, took place June 26th, the interval being three-and-a-half months, during which there were nine sets of patients delivered in the ward, and the same bed occupied on seven occasions. The fourth death occurred on July 5th, an irrupta, of peritonitis with extreme despondency, which seems to have been a prominent cause of her illness. No death occurred afterwards.

“ In No. 3 Ward, 121 deliveries took place, out of which there were three deaths from zymotic disease. The first, on December 16th, was a case of phlebitis on admission; the second, March 25th, a case of pyemia, after an interval of three months and nine days, during which nine sets of patients were delivered. The third, a case of phlebitis, took place June 11th, after an interval of nearly three months.

“ In No. 4 Ward, there were 129 deliveries, and three deaths from zymotic disease: the first, November 30th, a case of peritonitis; the second, December 19th, a case (irrupta) of peritonitis; the third, a case of hemoptysis with peritonitis on admission, on July 12th, after an interval of upwards of six months, during which seventeen sets of patients were delivered.

“ In No. 5 Ward, there were 122 deliveries, and two deaths from zymotic disease—the first in December, and the second in March. In the interval, five sets of patients were delivered.

“ In No. 6 Ward, there were 124 deliveries, and two deaths from zymotic disease: the first in November, 1870, a case of peritonitis; and the second, a case of peritonitis, in July, after eight months, during which time nineteen sets of patients were delivered in that ward.

"In No. 7 Ward, there were 139 deliveries with two deaths from zymotic disease: the first in April, of peritonitis; and the second, in August, of pyemia, with an interval of four months, during which nine sets of patients were confined in the ward.

"In No. 8 Ward, there were 140 deliveries, and two deaths from zymotic disease: the first in January, and the second in October, between which twenty-one sets of patients were delivered in the ward.

"In No. 12 Ward, there were 140 deliveries, with one death from zymotic disease."

In the fourth Report (for 1872), out of 1193 cases, there were only six deaths from zymotic disease.

No. 1.	Nov. 8th, 1871, in Ward 5	.....	Lower floor.
" 2.	April 24th, 1872, "	5 "
" 3.	May 11th, "	6 "
" 4.	July 6th, "	2	..... Upper floor.
" 5.	August 23rd, "	2 "
" 6.	August 21st, "	1 "

The ward-history is as follows:—

In No. 1 Ward, 126 deliveries took place, with one death from zymotic disease.

In No. 2 Ward, 129 patients were delivered, with two deaths from zymotic disease, one on July 5th, and the other August 26th, four sets of patients having been delivered between the two deaths.

In No. 3 Ward, there were 146 deliveries, and one death from zymotic disease.

In No. 4 Ward, there were 128 deliveries, and no death from zymotic disease.

In No. 5 Ward, 134 patients were delivered, with two deaths from zymotic disease—one November 8th, 1871, from pyemia; and one April 1st, 1873. During the interval between the two cases, sixty-six patients were delivered in the same ward, and all went out well.

In No. 6 Ward, there were 136 deliveries, and no death from zymotic disease.

In No. 7 Ward, 138 patients were delivered, and none died of zymotic disease.

In No. 8 Ward, 123 women were delivered, and none died.

In No. 12 Ward, 133 were delivered, and none died of zymotic disease.

In the fifth Report (for 1873), we have 1191 cases, with fifteen deaths from zymotic disease.

No. 1.	Nov. 15th, 1872, in Ward 8	.....	Lower floor.
" 2.	Dec. 9th, "	6 "
" 3.	Jan. 31st, 1873, "	7 "
" 4.	Feb. 18th, "	7 "
" 5.	Feb. 21st, "	3	..... Upper floor.
" 6.	Feb. 23rd, "	7	..... Lower floor.

No. 7.	March 16th, 1873, in Ward 2	.....	Upper floor.
„ 8.	March 21st,	„ 7	..... Lower floor.
„ 9.	March 23rd,	„ 7 „
„ 10.	April 25th,	„ 3	..... Upper floor.
„ 11.	May 4th,	„ 2 „
„ 12.	May 20th,	„ 12	..... Auxiliary building.
„ 13.	May 28th,	„ 12 „
„ 14.	July 1st,	„ 12 „
„ 15.	Oct. 7th,	„ 8	..... Lower floor.

The ward-history is as follows :—

In Ward No. 1, there were 133 deliveries, and no death from zymotic disease.

In Ward No. 2, there were 134 deliveries, and two deaths from zymotic disease, one in March, and one in April.

In Ward No. 3, there were 142 deliveries, and two deaths from zymotic disease, one in February, and one in March, with three sets of cases between.

In Ward No. 4, there were 141 deliveries, and no death from zymotic disease.

In Ward No. 5, there were 138 deliveries, and no death from zymotic disease.

In Ward No. 6, there were 129 deliveries, and one death from zymotic disease.

In Ward No. 7, there were 147 deliveries, and four deaths from zymotic disease : one in January, two in February (one of them was in the small off-ward, with one batch between the two), and one in March.

In Ward No. 8, there were 139 deliveries, and two deaths from zymotic disease, one in November, 1872, and one in October, 1873.

In Ward No. 12, there were 88 cases, and four deaths from zymotic disease, three in May, and one in July. At first sight, and I may say for the first time in these five reports, the deaths in Ward 12 seem to afford some ground for the suspicion of “hospitalism ;” but further inquiry will, I think, disperse it. One of the patients had been deserted by her husband. Another had been seduced ; and, though she was doing well, the reproaches of her mother, who had been admitted to see her, were instantly followed by rigors and pain. Two others were actually ill on admission. I do not think that we can fairly charge the hospital with having caused these deaths.

I must now, gentlemen, leave it to you to decide whether, taking the succession of deaths as to time or according to the wards, you think that they afford evidence of such an amount of malaria as would justify you in regarding the disease as having been originated or propagated by it, or whether you will not rather be impressed by the absence of any evidence of the transmission of zymotic disease, either directly from one patient to another, or indirectly by atmospheric influence. I have not found a single instance where the disease attacked a patient in the next bed to the patient who died.

But, before proceeding to the next step in this inquiry, I think I ought to say one word upon one cause, perhaps of the diseases, certainly of the mortality of these zymotic attacks. I allude to the mental condition of many of those who died. Besides the distress from poverty before entering the hospital, the bad treatment of husbands, desertion of husbands, I find that, of the twelve cases who died in 1869, three had been seduced; six out of the twenty-one cases in 1871; two out of the six deaths in 1872; and five out of the fifteen deaths in 1873.

To return to the next step in our inquiry: Dr. Johnston has constructed several elaborate tables, to show that, so far from the hospital being a focus from which zymotic disease radiates throughout the community, there were more deaths from this cause outside the hospital in the very districts which supply the hospital, and that, during the months when the hospital was quite free, they were sufficiently numerous to prove, first, that they could not be derived from the hospital; and secondly that, if patients from an infected district were sent to hospital, the disease was not conveyed with them, or found no food there.

Dismissing these collateral inquiries, let us inquire into the internal condition of the hospital itself. We have already seen that, although deaths from zymotic disease did occur, there was no epidemic of such during the five years. If a zymotic disease, prevailing and known to prevail, were accidentally introduced into the wards of the hospital, it might spread either by infection or contagion, without proving the existence of malaria or hospitalism, more than the occurrence of successive cases of scarlatina in private houses proves the existence of malaria there.

But suppose that it did not thus spread, suppose that in no instance did a second case occur in the same ward, or in the next, or in any part of the hospital until it was again introduced *ab extra*: surely the conclusion would be irresistible that the atmosphere of such hospital was not in a state to propagate or favour the spread of such diseases, and therefore that a large hospital is not necessarily a hotbed of zymotic disease.

Now, during the last five years, we have had very severe epidemics in Dublin of small-pox, scarlatina, and typhoid fever, and it has repeatedly happened that women in labour have been inadvertently received into hospital labouring under one or other of these diseases.

I find that in 1869 there were so received two cases of typhoid fever; in 1871, a case of typhus fever, a case of typhoid, five cases of scarlatina, and one case of small-pox; in 1872, ten cases of small-pox and three of scarlatina; in 1873, one case of measles.

This, I take it, was a very crucial test of the salubrity, or the contrary, of the hospital. If the hospital were "malarious," if its wards were "fever-nests," one would suspect that the epidemic, once introduced, would inevitably spread through the ward or wards, and even the entire hospital, with even more facility and virulence than it does

in private houses. What then was the result of the introduction of these epidemic diseases into the hospital? I will give it to you in the words of Dr. Johnston himself. He says: "And here I may take the opportunity of stating that, notwithstanding the fearful epidemics which prevailed during the past year, and although several patients were admitted from infected houses, and many with the disease absolutely upon them, it never extended beyond the one individual. In a word, the hospital was perfectly free from any contagion."

Such, gentlemen, are the results which Dr. G. Johnston's reports have enabled me to lay before you. They present three distinct series of facts, directly bearing on the great question before us, and of such a nature, that it is hard to conceive a higher or stronger description of evidence for the solution of our problem. No doubt the data might be larger, or the experiment spread over a greater length of time; but still the facts, so far as they go, surely vindicate the hospital from the charge of being a seat of endemic disease, or the source of an epidemic or a congenial atmosphere, where zymotics of any kind will spread and fructify.

OBSTETRICAL SOCIETY OF EDINBURGH.

Meeting, March 25th, 1874.

Dr. J. MATTHEWS DUNCAN, *President, in the Chair.*

Comparative Anatomy of the Arterial Cerebral Circulation in Animals and the Human Subject, as bearing on Parturient Apoplexy and Convulsions.

By Professor WALLEY.

FROM various causes I have been led to inquire into the reason why the cow should be the subject of convulsive and apoplectic parturient affections, particularly apoplectic, while the mare, the sheep, the bitch, and in a great measure the sow, are free from them.

From remarks made at a meeting of this Society, now nearly two years ago, I became acquainted with the fact that puerperal apoplexy and convulsions occurred also in woman. This induced me to endeavour to explain why this affection, as also that of apoplexy, was confined mainly to woman and the cow. And after much thought, it occurred to me that some anatomical resemblance might exist in the cerebral circulation, which would satisfactorily clear up the matter.

I at once injected the arteries of the head of a heifer which I opportunely obtained, and dissected it, and was rewarded by obtaining a good view of the circulation. This dissection I have much pleasure in exhibiting to the members of your Society to-night, and

also of explaining it. I may remark, that previous to this dissection I had not formed a distinct idea of the circulation of the brain in the ox; since its accomplishment Chauveau's work has been translated, and I find that he coincides with my anatomical description of these vessels, substituting, however, *réseau admirable* for *rete mirabile*. The main points of difference in the circulation of the brain in the five animals I have mentioned, and the point of resemblance in the circulation of the brain of man, are in connexion with the distribution of the internal carotid and the formation of the basilar artery and the circle of Willis.

In the horse, the vertebral does not enter into the formation of the arterial circulation of the brain, the basilar artery being formed by the junction of the cerebro-spinal branches of the occipital inside the theca vertebralis, gaining this point by passing through the two foramina at the anterior part of the wing of the atlas, forming thereby a curve of some importance in checking the force of the arterial flow into the cranium. Furthermore, the very act of meeting its fellow as it does at a right angle, and then dividing into a backward (*middle spinal*) and a forward (*basilar*) branch, is a material check on the force with which the blood is propelled into the cranial cavity.

The internal carotid, the other main factor in the cranial circulation, performs several tortuosities before entering the foramen lacerum basis cranii. After penetrating the dura mater, it makes one curve forwards and one backwards, and gives off the posterior communicating artery to join the basilar, and finally divides into the anterior and middle cerebral, giving off also an anterior communicating branch, which meets a similar one from the corresponding artery of the opposite side.

The ophthalmic artery anastomoses by its meningeal branches with the meningeal branches from the anterior communicating artery, but has little or no effect on the cerebral circulation.

The internal carotids, with the basilar posteriorly, form the circle of Willis, and at their internal flexure are united by a transverse branch behind the pituitary gland.

In the pig and dog, the basilar artery is formed by the cerebro-spinal branches of the occipital as in the horse. In the former animal, the internal carotid passes into the cranium as in the horse, but forms with the ophthalmic and spheno-spinous (*meningeal*) artery a *rete mirabile* as in ruminants. In the latter animal, the internal carotid passes into the cranium, forms a peculiar curve, which leaves the cavity through the oval foramen, and re-enters it again after receiving a branch from the external carotid, but does not form a true *rete mirabile*.

In the sheep and ox, the vertebral passes into the spinal canal, at the hole of conjugation between the dentata and third cervical vertebra, passes forwards and anastomoses with the occipital (which gains access to the cranium, not through the atlas, but through the

condyloid foramen of the occiput), sending branches through the foramen in the wing of the atlas to supply the muscles of the occiput. These arteries then pass forward to form the basilar and a tolerably large posterior plexus, on the basilar process of the occiput underneath the medulla oblongata, the spot in which arterial rupture usually occurs.

The internal carotid is absent, but is replaced by a large sphenospinous, or meningeal branch, which passes into the foramen lacerum basis cranii, sending backward branches to anastomose with the posterior plexus formed by the occipital and vertebral, and forward branches to unite with large arteries given off with the ophthalmic from the internal maxillary, and which gain access to the cranium through the superior sphenoidal canal. From this union the *réseau admirable*, a dense plexus of minute vessels situated at the side of the sella turcica, and communicating with the same network in the opposite side, arises. Finally, the *réseau admirable* originates trunks corresponding to the internal carotids, which unite with the plexus formed by the vertebrals and occipital, and give off the three cerebral arteries.

The difference in the circulation in the ox and sheep, and upon which I base my theory, is, that in the ox each vertebral, although anastomosing with its fellow, proceeds forwards on its relative side of the spinal canal and opposite the atlas, sends off a direct branch to the posterior plexus formed by the anterior branches of the occipital and the posterior branches of the sphenospinous; while in the sheep the vertebrals pass into the spinal canal, inosculate, proceed forwards as a single artery, again bifurcate, and anastomose with the occipital as in the ox. The posterior cerebral plexus is not, however, developed to the same extent, neither is the circulation so complex as in the ox.

The point to which I wish to direct your attention is, the existence of the plexus of vessels underneath the medulla oblongata in the ox, and the generally larger supply of blood to the brain in comparison with other animals; and further, the direct branch from the vertebrals to the posterior plexus to which I have referred, affords a direct channel of supply which does not exist in other animals. The affections of which I have spoken occur most frequently in short-necked, round-barrelled cows in a highly plethoric condition, the short neck favouring the blood-pressure through the vertebrals on the cerebral circulation, in the act of straining to give birth to the fetus.

The point of resemblance in the human subject is, that (if I am rightly informed) the basilar artery is formed by the vertebrals, and apoplectic attacks are also most frequently seen in short-necked, stoutly built subjects.

Meeting, May 13th, 1874.

*On the Occasional Arrestive and Discutient Influence of Pregnancy
over Pelvi-abdominal Tumours.*

By ALEXANDER MILNE, M.D.

Although the operation of ovariectomy, once the most fatal, and the dread of surgeons, has now been rendered one of the safest in surgery, those less heroic means and measures, whereby arrestment and even cure are occasionally effected, should not be overlooked or ignored. There is doubtless a tendency to become oblivious of these, or to view them with something like contempt; partly owing to a scepticism as regards the utility of anything and everything short of the great operation (founded doubtless on frequent failures), and partly owing to the splendid success of that operation itself. Now, I do not mean to say that many cases of ovarian tumours are capable of cure by any means short of extirpation; still, I think there will be found, scattered through the pages of our journals from time to time, a goodly number of cases where a permanent cure was achieved without resort to the major operation. In some cases it is the bromide of potassium or the chlorate of potash that cures; in others, pressure or tapping, or both combined; or the happy result may be brought about by an accidental blow on the abdomen. Here is the report of a case of the latter kind; only, I regret to say, the blow was intentional. "Dr. Bezencenet mentioned at a meeting of the Vaudian Medical Society the case of a woman suffering from ovarian dropsy who had been tapped several times. In a drunken fit, her husband kicked her, and ruptured the cyst. Slight peritonitis followed, the liquid was soon absorbed, and the tumour entirely and permanently disappeared." You will find other cases of a similar kind in the journals from time to time. In addition to these agencies, there is that of Nature herself; in other words, a cure may come about spontaneously; that is to say, absorption may preponderate over secretion. We have had such cases reported at this Society; Dr. Ritchie, for instance, detailed one; and although, if I remember aright, a cure was not effected, there was from time to time a great diminution of fluid; in fact, there was an alternated rise and fall.

I have thought it necessary to say this much preliminarily, because, as I before remarked, the cure of such tumours, apart from ovariectomy, is doubted by not a few; and, therefore, it might likewise happen that the cure by pregnancy might awaken equal scepticism.

And now as regards the influence of pregnancy, which is the more immediate subject of my short paper, let me observe that I am quite aware that I take up new ground when I venture to say that that influence may in some cases be curative. Ground that will be strongly contested too, doubtless, because the bulk of our authorities are

agreed in ascribing a damaging power to the gravid state. Pregnancy, they nearly all forcibly affirm, not only accelerates the growth of these cysts, but excites inflammation, adhesions, and suppuration, which may be of a fatal character. So firmly is this belief held, that virgins in whom an ovarian tumour has been detected are recommended not to marry; and the married, in a similar plight, are recommended to abstain from sexual intercourse, or, at least, to keep clear of the most favourable periods for conception. Now, I do not mean to question the general soundness or correctness of a belief so widely held, endorsed, too, by so many men of eminence and mark; but having met with some cases where a cure was effected apparently by pregnancy alone, it has occurred to me that the commonly accepted doctrine has been formulated rather too stringently, and that some modification is demanded. This in the interest of unmarried females who may be betrothed, and in behalf of the married women who may not care to submit to the restraints of celibacy; this also in the interest of health, which is supreme; for, if it is found that pregnancy in many cases, so far from aggravating, ameliorates, then how uncalled-for and improper the veto upon marriage, and the embargo on sexual intercourse.

But I must now give notes of cases. I regret they are so few; others, however, may be able to supplement them.

CASE I.—Miss H. consulted me (June, 1869) in regard to a difficulty in making water, which she said came on gradually, and got worse from day to day. I did not examine her locally, being a virgin, but prescribed a little tincture of hyoscyamus and camphor; telling her, however, if she should find herself no better in a day or two, to advise me again. In a day or two she cast up, saying that she was not only no better, but a great deal worse: there was, in fact, retention. I had now no hesitation in instituting an examination, and the proceeding was amply justified by the condition of things. I found an anteverted cervix pressing on the urethra, and that this displacement was brought about by a tumour. This occupied the right side of the utero-rectal fossa, and appeared to be about the size of an orange. It was somewhat elastic, and not painful to touch. It was quite mobile and could be elevated with ease. I immediately pushed back the cervix, and emptied the bladder with a long flexible catheter. Daily, for about a fortnight, catheterism was needed, but after this, owing to the ascent of the tumour into the abdomen, the bladder performed its functions readily. The case was diagnosed as a monocystic or unilocular ovarian tumour. This lady was engaged to be married, and I was consulted about the propriety and safety of it. I said that it was usually viewed as a bar to marriage, but that I had not had great personal experience in the matter. In December, 1869, or about six months after I had detected the growth, the lady was married. Love, or policy, or caprice had triumphed over fear. I was aware of it, and appre-

hended evil. The anticipated evil, however, never came; at least, there was nothing exceedingly serious. In April I was called on to visit her, as she was suffering from sharp pains over the abdomen. In addition to this, I found her extremely prostrate, and rejecting all food. The pain was assuaged by opium, but the vomiting continued more or less for two days; after this it ceased. In the middle of September I delivered her of a healthy female child. Since then she has had two, a male and female, and the ovarian tumour has completely disappeared.

CASE II.—Mrs. A., aged 28, and the mother of three children, was in labour for the fourth time in August, 1870. On examination I found the os rather rigid, and pressed up towards the pubes, by a large fluctuating tumour in Douglas's space. This I had little hesitation in concluding was ovarian. I was fortunately enabled to push it up above the pelvic brim, and in a couple of hours or so, a male child was born with ease. In April, 1872, Mrs. A. was again delivered of a son. On this occasion the tumour came down, but was evidently half the size, showing that diminution, not enlargement, had taken place. In February last she gave birth to a female child, the tumour coming down again still further reduced, so much so as to require no interference.

CASE III.—Mrs. L., aged 42, and the mother of six children, sent for me in September, 1871, complaining of severe pains, like those of labour. She was nursing her sixth child, which was fourteen months old, and thought it hardly likely that she was in the family way. On examining per vaginam I found the following: Cervix uteri slightly anteverted and turned to the right. In the recto-vaginal pouch, a rounded tumour of pretty firm consistence, and about the size of the closed fist, could easily be detected. It was quite mobile, and quickly gravitated after being pushed upwards. As the uterus was somewhat enlarged, and the woman believing herself to be in the family way, I did not employ the sound, but concluded that the enlargement was ovarian. Seven months after I was called on to deliver her. On arrival, I found the os fully expanded, and head presenting below the pelvic brim, but pushing before it an oblong elastic tumour. From its shape I was inclined to think it hernial, but, on careful manipulation, I concluded that it was cystic. As it was evidently obstructing the descent of the head, I chloroformed the patient, pushed the head above the pelvic brim, and then elevated the tumour. It descended again, however, before the head, and I had to deliver by version. Twelve hours after delivery there was intense abdominal pain, and other symptoms of peritonitis; but by means of the usual remedies and appliances these were satisfactorily met, and the woman recovered well. I have not been called since to attend her, and I conclude that the tumour had been discussed during labour. I should like exceedingly to have made a commentary on the foregoing cases, but I have not found time to say all that I could have wished. Only let

me observe, that it appears to me quite natural to expect that the pressure of an enlarged uterus may often discuss an ovarian tumour. Pressure is an old and effectual remedy in effusions, and wonderfully facilitates and accelerates absorption. In the case of an ovarian cyst, the pressure of an enlarged womb is, I think, fully more likely to promote absorption or disruption, and subsequent absorption, than the external pressure by bandaging. Anyhow, the principle is the same.

The cases I have reported are all, so far as I could make out, monocystic, and it is very probable that these are the cases most likely to be benefited by pressure. Doubtless, uniloculars soon become multiloculars; but doubtless, also, pressure helps to arrest proliferation.

It would not be right for me to omit saying a word or two on the possible risks. Pressure may promote inflammation and adhesion, and it may induce a bursting of the cyst with evil, nay, fatal results; still, from the experience of these three cases of unilocular ovarian tumour, I am more than ever inclined to think that pregnancy need not be the bugbear here that it has been represented. If, then, any Fellows have a maiden patient, both betrothed and the possessor of an unilocular ovarian, let them not say nay when asked if she may marry; on the contrary, and especially if the growth is small and pretty clearly a monocystic ovarian, let them sanction the step as a probable journey towards a perfect cure.

Meeting, April 8th, 1874.

An Obstetric History: A Vesico-vaginal Fistula, with Subsequent Conceptions.

By A. E. M'RAE, C.M., M.D., Penicuik.

The operation for vesico-vaginal fistula is not of very ancient date. The fertile brain of John Hunter is said to have given birth to the idea, but many years elapsed before the attempt was made to close the fistula between the vagina and the bladder caused by protracted labours. Dr. Drew, of Tunbridge Wells, performed the first operation. The success of the case was made known at Guy's Hospital, and soon the operation became famous. Nowadays there are few hospital surgeons but would try the operation. It ranks with the higher class operations in the modern department of plastic surgery. The good it has done to weak suffering humanity has been very great; and if the sufferers were to lead a celibate life after the operation no doubt it might be an unmixed blessing. Unfortunately, however, this cannot always be so, and the artificial condition being only a substitute for a better state of things, the compromise is not equal to every exigency. What is a blessing in one circumstance may become a curse in another; and if the plastic operation of closing a vesico-vaginal fistula may relieve a condition of things which "renders life but a long disease," the processes of gestation and parturition subse-

quently may be fraught with great peril. Within the last year or two I have met such a case, and as the history appears to me to be unique, I venture to lay it before you. Besides illustrating the above-mentioned point, it also indicates the benefits of scientific skill, and its opposite, the direful consequences of drivelling midwifery.

Mrs. C., aged 21, was seen by my neighbour, Mr. Cox, on 26th October, 1871, at 4.30 P.M. He found her in labour with her first child. She had been in this condition for the previous two days and nights, and had been treated with opium; but her medical adviser had neglected the conduct of the case. Mr. Cox found her unconscious, with stertorous breathing. The head was impacted in the brim. Delivery was effected by means of the forceps, with very great difficulty, at 6 P.M.

At 9 P.M. her condition was very unsatisfactory, and Dr. Drysdale, who happened to be living in the neighbourhood, was called in. The patient was still comatose. The bladder was found to be distended, and the catheter was used. She gradually came out of the comatose condition, and subsequently made a fair recovery; but a vesico-vaginal fistula was found to exist. On the 14th December, she was sent to the Edinburgh Royal Infirmary; and in the records of that institution exists the following entry:—"Margt. C., aged 21, about seven and a half weeks ago, was delivered of a male child by instruments, and vesico-vaginal fistula followed.

"15th December.—Cicatricial tissue around fistula was removed, and the fresh edges brought together by five silver-wire sutures. Sigmoid catheter kept in urethra.

"24th December.—Catheter removed.

"29th December.—Stitches removed.

"31st December.—Dismissed cured, sixteen days after operation."

I understand Dr. Joseph Bell was the operator.

In the spring of the following year, 1872, she again fell with child, and on the 7th September she was seen by Mr. Cox at 11 A.M. He found that she had had severe uterine pains since the previous midnight. On examination, no presenting part could be made out. The pains were very severe, and almost constant, although little or no uterine action could be detected. The pulse was 90; the tongue foul and loaded.

At 1 P.M. Mr. Cox requested me to see the case with him. I found the woman in great agony, with constant and severe pains. On examination, I experienced great difficulty in making out the position of the os. Far up on the anterior wall of the vagina, a tumour about the size of a small orange existed. The lower edge of this mass felt continuous with the anterior wall of the vagina. The upper edge was attached to the posterior wall, and felt continuous with the body of the uterus. The tissues from the posterior wall to the anterior, and for some distance downwards, were in a state of extreme tension; but no os, as usually found, could be detected. A very slight depression could just be made out about half an inch

from the point where the tumour united with the anterior wall. Around this hollow existed an annulus of denser, more compact fibres, but nowhere could any patency, by repeated and careful examination, be discovered. The pains being constant, this tenseness showed no tendency to relax. Externally, a hard and well-defined tumour was easily made out, occupying the ordinary position of the pregnant uterus, extending nearly to the umbilicus. It was hard, well-defined, and seemed in a state of contraction.

It was at this period I learned, that on her first pregnancy she had been attended by her own medical man, who administered opium, sat the most part of a night with her, left, and neglected to return. On the third day, Mr. Cox was called in, and found the woman comatose, and the head impacted in the brim, as stated above. How long she had been in this condition it was impossible to say, but the result was a difficult forceps extraction, and a vesicovaginal fistula. The cicatrix consequent upon the operation for the cure of this condition had considerably contracted, and there had also been to some extent a loss of tissue, caused firstly by the pressure and subsequent sloughing, and secondly, by the paring of the wound preparatory to the operation. This combination of causes all operated in the same direction, in decreasing the quantity of tissue in the region between the cervix uteri and the anterior vaginal wall. In fact, this region was completely obliterated. In consequence of this, the dilatability of the parts was very materially interfered with. The total occlusion of the os, however, was more difficult to explain, and at this stage of the history I was totally unable to account for the condition. It was quite possible for a patency to exist, although I could not make it out.

This condition of things was somewhat perplexing, and it was not lessened by the extreme state of exhaustion that existed with the condition of extreme uterine action. The whole nerve force seemed to have left the body generally, and become concentrated in the nerves of the uterus. It was evident, therefore, that our first duty was to correct this state, and restore the equilibrium of the distribution of nerve-force—that is, to take from the womb what was in excess, and restore it to the other parts of the body. It was necessary also to temporize a little, so as to allow the woman to gain strength, and prepare her for her duty, and for any surgical interference that might be found necessary. It was therefore thought expedient to administer 20 grains of chloral hydrate, to be repeated if necessary, and to have the parts bathed frequently with tepid water, if possible.

At 3 P.M., she was rather easier. The pains were not so constant, nor so severe, and she had slept a little, having had only one dose of chloral.

At 6 P.M., she was pretty much in the same condition. The parts were dry and hot. I thought it now advisable to administer opium instead of chloral, fearing cardiac exhaustion. I advised an abundant use of tepid diluents, also 30 minims of tinct. opii, to be repeated at 9 o'clock if necessary.

At 11.30 P.M., she expressed herself as feeling much better ; had slept occasionally, and has had only a little pain at times. The parts were very hot ; no patency could be detected. The tension, however, was not quite so great, and I could detect the head presenting. The parts were still very hot. The opium and diluents were continued, and a glass of castor-oil was ordered for the morning, as the rectum seemed to contain some scybala.

8th September, 10 A.M.—Had passed a good night. Pulse 120. Perspiring freely ; tongue still loaded. Had passed water in quantity. Bowels not opened. Complained of some pain. No alteration in condition of parts, but patient feels stronger. Co-ordination of nerve-force seemed therefore improving. To have another dose of castor-oil.

3 P.M.—Pulse 120. Bowels opened. Great heat of skin. Some tenderness on pressure in right iliac region. Has slept a little. Parts hot, but moist for first time since commencement of labour.

7 P.M.—Parts more relaxed. Os somewhat definable, but no patency could yet be discovered, although, on account of the thinness of the posterior part of the cervix, the head could be detected presenting.

11 P.M.—Made an examination under chloroform, when something like an os could be detected, about the thickness of a sixpence, but a membrane firm and dense stretched across the os ; no patency could yet be made out. This membrane stretched from the anterior wall of the vagina—representing in this case the anterior lip of the os—to the posterior lip, and was inserted into, or rather was attached to, the cervix, about $\frac{1}{4}$ inch above the lip of the os. I attempted to rupture this membrane at all points of its surface, especially at its posterior union, but failed.

9th September, at 12.30 A.M.—An aperture that could admit a crow-quill was discovered in the centre of the posterior edge of this membrane, but the membrane and the posterior edge of the os were too tense and unyielding to admit of dilatation. It was now time, however, that some action should be taken, for there was little chance of the fetus being alive, seeing that the uterus had been so many hours in a state of rigid contraction. It was necessary, therefore, that delivery should be effected, and that speedily, as the woman's condition was becoming somewhat critical. We again put her under chloroform, and with a curved scissors, one blade of which I passed into the uterus through the crow-quill aperture, I cut the membrane in two places, extending the wound into the cervix, carefully avoiding the old cicatrix, and cutting only into uterine tissue. A third wound was made into the posterior lip, for about an inch into the cervix. The orifice thus made was immediately filled by the membranes, and there was no hemorrhage. The head was easily made out presenting ; it was of small size. We now waited for some time, but as no pains supervened we gave 30 m. tinct. op., and left, with orders to be sent for should pains come on.

At 4 A.M.—Mr. Cox was called, and finding no advance he gave first one and then another dose of tincture of ergot to increase the pains, as the general strength was failing.

At 5 A.M.—The fetus, small as it was, became impacted, and the pains were powerless to expel it. Forceps were now used, and a dead fetus of about five months was born. There was no particular hemorrhage, but the placenta could not be removed.

At 9.30 A.M.—I again saw her, and found an hour-glass contraction, with the placenta retained in the upper chamber. We put her under chloroform, and with some difficulty I passed my fingers wedge-shaped fashioned through the constriction, and succeeded in detaching the placenta, which was adherent in some places. Very little hemorrhage occurred, and with kneading the uterus contracted fairly.

In the evening she felt comfortable. Pulse 112. Perspiring freely; had passed water, but the uterine discharges are scanty. We ordered hot fomentations and abundance of farinaceous diluents. From this period she rapidly convalesced.

12th August, 1873.—Mr. Cox was again sent for at 10 P.M., and found that the waters had broken in the morning, after some hours of pains. On examination he found the os again completely occluded. As the pains had no effect on the uterus he left, and called next morning. The patient said she had felt motions during the night, and had slept a good deal. The condition of parts was unchanged.

At 5.30 P.M.—The pains were very severe, and there was some uterine action present, but no patency could be detected.

At 7 P.M.—I saw her, and on examination could detect no orifice in the uterus. Ordered her a large dose of tinct. op. (3j), and 3ss to be repeated at midnight.

14th August.—Had felt motion during the night. A well-defined os existed, and was about the size of a florin. I ordered diluents, and the os to be dilated with the fingers. At 11.45 A.M. the os was fully dilated, and the pains were very severe. About mid day, as the head would not descend, Mr. Cox gave her chloroform, and finished the labour with forceps. The child was a large full-grown male, and died immediately on being born. She made a good recovery.

23rd March, 1874.—I called to-day and was kindly permitted an examination. I found that she had been ailing for several days with severe pains in the lower parts of the belly, and she was afraid that she was going to have another miscarriage; for she was again four months gone with child. These pains had been preceded by a long period of costiveness, and the alimentary tract seemed greatly out of order. For this condition her own medical man was advising remedies.

On passing the finger into the vagina the top of the tube was reached at a distance of $2\frac{1}{4}$ inches from the external orifice; there was no depending cervix, and no anterior nor lateral culs-de-sac. The posterior wall of the vagina was much less concave than usual.

The anterior was occupied by a hard, almost unyielding tumour, extending from about $\frac{1}{2}$ inch behind the *os urethræ* to the tip of what should have been the posterior cul-de-sac. It was slightly convex, the convexity looking towards the sacrum. A considerable amount of tension also existed along this convexity, for the surface was very smooth, and the *os urethræ* felt as if it were dragged upon. Midway between the two extremes of this convexity there is the tip of the cul-de-sac and the union of the tumour with the anterior wall of the vagina proper; with some difficulty a very narrow slit could be detected, into which only the nail of the forefinger could be inserted. It was about $\frac{1}{2}$ inch long, and extended transversely across the face of the convexity. Externally a large tumour was found occupying the normal position of the gravid uterus, reaching superiorly to within an inch of the umbilicus.

On the evening of the same day I was requested by Mr. Cox to see her again. On arrival I found that she had had several attacks of hemorrhage from the uterus, and that the discharge, though not in large quantity, was accompanied with severe uterine pains. The *os* was now more readily detected, and felt as if it could admit a sixpence sideways. No hemorrhage now existed. The bowels, which contained masses of scybala, had not been opened for some days. I ordered a wineglassful of castor-oil, and rest in bed. The symptoms did not recur, and she is now walking about quite well.

This melancholy history speaks for itself, and therefore needs few remarks from me. I have searched the records of the past fifty years, but cannot find a similar case. The condition of rigid unyielding *os* is far from rare, and cases of complete occlusion of the *os*, from organization of the plug, or maldevelopment of the tissues of the cervix uteri, are recorded, in which it was necessary to enlarge the *os* or pierce the membrane and divide the cervix in order to permit the contents of the uterus to be expelled. But I have seen none where a rigid *os*, an organized membrane, and a want of dilatable tissue combined to frustrate the efforts of the parturient uterus. In operating I had to bear in mind that the incision would become a rent, *i.e.*, more extensive,—that, indeed, there was no limit to this extension, except the necessities of the descending fetus. I avoided the anterior wall, as there was more tissue to work upon on the posterior wall of the cervix, and less chance of the tear therefore extending into the bladder; although, had the head been larger, there was a danger of the rent extending to the peritoneum. Either way there was danger, but it was necessary that the woman should be delivered with the least possible risk.

PATHOLOGICAL SOCIETY OF DUBLIN.

*Meeting, February 14th, 1874.**Sphacelus of Vagina, with Fistulous Communications into Bladder and Rectum.—Destruction of several inches of Ileum, and Permanent Severance of this Intestine.*

By Dr. WENSLEY BOND JENNINGS.

The following case was, the Author thought, the most interesting it had ever been his fortune to meet with, being—so far as he had been able to ascertain—in fact, unique of its kind, affording, as it did, an example of recovery, or rather, to speak more correctly, of escape from death, after injuries had been sustained of such a nature and to such an extent as to preclude, in the judgment of almost every one, the possibility of such a result. The patient from whom it had been obtained was admitted into the Female Hospital of the South Dublin Union, so far back as the 21st September, 1871, having come to Dublin from a distant part of the country in search of relief from the sequelæ of her first confinement, which had taken place about twenty years previously, and which she represented to have been one of unusual delay. Her appearance, which was anemic and emaciated, was at first entirely, though as was subsequently ascertained, not altogether correctly, attributed to the sufferings inseparable from the serious visible ailments under which she had laboured during so many years. These, though they undoubtedly did exercise considerable influence, yet were not the sole causes of her wasted *physique*, which, as the post-mortem examination evidenced, was to a great extent referable to a source not then suspected. An examination made at that time, which disclosed the presence of two inter-femoral tumours—namely, in front the inverted bladder, and posteriorly, the prolapsed uterus, as likewise the most extensive destruction of the vaginal walls, added to her rather advanced age, which she admitted to be fifty years, and the other features of the case, caused both himself and Professor Sinclair, who most kindly favoured him with his advice, to decide against the performance of any operation, and thus to reluctantly destroy the hopes she had previously entertained. This advice—to bear the ills she knew of—she accordingly followed for more than a year and a half, until in an evil hour she listened to the counsels of some lady visitors, whose representations so destroyed her feelings of resignation and so re-awakened former hopes, that she determined, to use her own words, “that something should be done for her relief,” notwithstanding that the certain danger to be incurred, and the very uncertain benefit to be derived from any operation even if successful, were fully explained to her. At length, yielding to her importunities, and in opposition to his better judgment, he consented to undertake the only operation which the circumstances of the case admitted, and which was at best

but a palliative one—namely, to effect “atresia of the labia” throughout their two posterior thirds, and thus effect the permanent reduction of the external tumours. Into the details of the operation, during which he enjoyed the valued assistance of Professor Sinclair, and which was easily and rapidly performed, and without the employment of any anesthetic, it was not necessary to enter further than to say that it simply consisted in paring and then uniting the opposed surfaces by deep and superficial interrupted sutures, the former being secured over pieces of elastic bougie. The escape of any urine which might accumulate in the pouch thus constructed was secured by the constant presence of a large gum-elastic catheter introduced in front, and by keeping the patient as much as possible in the semi-prone position. A few hours, however, after its termination most distressing nausea and vomiting set in, and of such an obstinate character as to resist all treatment, returning with more or less persistence on the administration of food, even of the blandest kind and in the smallest quantities. In the course of the third day it became necessary to remove the sutures, partly in the hope of relieving this irritability of stomach, and partly in consequence of fetor, which then became perceptible. The union, which was then found to have commenced, even under such unfavourable circumstances, was, however, rapidly destroyed by sloughing, which, having then set in, continued during the two following days, when she was at length released from her sufferings by death, which occurred on the evening of the fifth day after operation. In the course of the post-mortem examination, which was made by the assistant resident medical officer, under his superintendence, Dr. Jennings was surprised, when the intestines were raised out of the false pelvis, to perceive that the ileum was attached, as he at the first glance supposed, by simple adhesion of its external coat to the fundus of a tumour which occupied the cavity of the true pelvis. On a closer examination, however, his surprise was much intensified to find that this was not the fact, but that this intestine was completely severed, and that each extremity was separately connected to an artificial cloaca here situated; that on the right side the intestine was impervious and reduced to the thickness of an ordinary quill, to an extent of about two inches, while on the left it opened with unreduced calibre into this chamber, which communicated with the ileum from above, the bladder in front, the rectum from behind, and the vagina below. This case differed most strikingly from every other recorded instance of intestinal injury that had come under his notice in practice or reading. In cases of artificial anus, and recovery after loss of portions of intestine from “volvulus” or “intussusceptio” there did not exist any permanent interruption of continuity of canal; in the former the loss of substance was only lateral, and in the latter the permeability of the canal, even if ever interrupted by complete section, was soon re-established by subsequent direct union, while the strong probability was that the two processes, that of severance and

re-union, progressed *pari passu*; but in this case not only had there occurred permanent section of all the coats of the intestine, but also the functions of the ileum, in fully half its extent, and of the entire of the colon and rectum, had been completely arrested during the lengthened period of more than twenty years.

The post-mortem did not present the slightest trace of peritonitis, old or recent, and death evidently was induced by exhaustion.

Meeting, February 28th, 1874.

Vesical Calculus in the Female Spontaneously Expelled.

By Dr. SINCLAIR.

The Author wished to bring before the Society an interesting case of what he might term the parturition of a stone from the female bladder, and to exhibit the calculus. The woman from whose bladder the stone was discharged was admitted some time ago into Sir P. Dun's Hospital, was twenty-five years of age, and had been married not long previously. She was a native of England—of a dark, sallow complexion. She had been suffering for two years from almost constant pain, more or less severe, and latterly with bearing down sensations, considerable increase of *intensity* of pain, and incontinence of urine. Her face indicated great distress, her body was attenuated, and a further investigation of her symptoms indicated that her bladder was affected—in other words, that a condition of cystitis existed. On making a vaginal examination, the finger, on passing the vulva, was immediately arrested by an immovable tumour of stony hardness, and of considerable size, pressing backwards towards the rectum. It seemed as if there was some tumour arising from the posterior surface of the anterior pelvic wall pressing the anterior wall of the vagina backwards. The examination caused considerable pain. On passing a uterine sound into the urethra, the instrument was arrested, less than an inch from the orifice, by a hard surface, evidently a stone of considerable size, which had distended the neck of the bladder and posterior portion of the urethra, and had become, as it were, encysted in that position. The urine could be seen constantly trickling from the meatus. The finger could not reach above the tumour, so as to touch the cervix uteri, but a supra-public examination led to the belief that her statement as to her being in the fourth month of pregnancy, or “thereabouts,” was correct. Taking all the circumstances of her case into consideration, Dr. Sinclair determined, a few days after her admission, to cut down upon the stone, and to treat the case subsequently as if it were a urethro-vaginal fistula.

When the woman was placed on the table for operation, it was suggested that the condition of the parts might be caused by some bony growth from the pelvic surface of the pubes, which had penetrated into the bladder and urethra. An endeavour was then made to pass a flat silver female catheter all round it, which succeeded in proving there was no connexion between the supposed tumour and

pelvis. However, the stone was dislodged, and pushed backwards into the bladder. It was suggested then to crush, but Dr. Sinclair determined not to sanction the operation—firstly, because of the possibility that the nucleus of the stone might consist of some foreign substance; secondly, it being so large, several sittings would be essential to break it up and get rid of the *débris*, which the bladder, in its existing condition, was ill calculated to bear with impunity; and lastly, because of the existence of pregnancy. On the evening of the same day upon which the calculus was dislodged, some feverish symptoms set in. The day following, symptoms of threatened abortion were present, and on examination the stone was found in its original position. Hemorrhage took place, not profusely, also uterine action. The fetus was discharged in a short time, and in forty-eight hours afterwards the membranes and placenta were expelled.

Dr. Sinclair now determined to permit her to remain undisturbed till such time as involution had been completed, and then to carry out his original intention. However, in a little less than three weeks after her abortion, he was sent for one evening and informed that his patient, while sitting on the night-chair, and when forcing down, had passed the stone. On making an examination about twenty minutes after the stone had been passed, he found an opening about an inch from the meatus, through which the stone had issued; it was only large enough to allow the easy introduction of the index finger, or probably about half the diameter of the stone. Dr. Sinclair came to the conclusion that he would not interfere with the case for twelve or fourteen days, in the hope that the orifice would still further contract. At the expiration of that time it had become so narrowed that it would not more than admit a No. 12 catheter. He now pared the edge of the opening, and used sutures in the usual way. On the 11th day the sutures were removed, and the union was found to be perfect. The bladder soon regained its health and recovered its power. She entered hospital on the 11th of June, and on the 6th of August went to the country quite well. She has since had a child at full term, and at present enjoys perfect health.

Dr. Sinclair exhibited the stone, which measured $2\frac{5}{16}$ inches in length, $1\frac{1}{4}$ in thickness, and $1\frac{5}{8}$ in width. It weighed 2 ounces and 37 grains, and was oval in form.

Both ends of the oval were rough, the smaller and anterior extremity being very much so: this was supposed to have been caused by the frequent striking of the sound against it. When divided, three distinct formations were observed—an external whitish layer of ammoniaco-magnesian phosphate, an inner layer, yellowish, composed of pure lithic acid, and a nucleus of oxalate of lime. He agreed with his colleague, Dr. Bennett, who considers the nucleus to have been originally a renal calculus; that during the formation of the lithic acid layers there was no irritation; and that it was only during the deposition of the external coating that cystitis took place, which, together with the encystment of the stone, gave rise to symptoms compelling

her to apply for relief. Dr. Sinclair resumed his observations upon this case, and concluded by stating—the practical deduction from its history was that which nature had indicated—namely, that the safest and most convenient method of treating such cases was to cut down upon the calculus, remove it, and act subsequently as if it were vesico- or urethro-vaginal fistula.

Obstetric Summary.

Remarks upon the Course of Labour and the Treatment in Contracted Pelvis.

A paper on this subject was read by Prof. Spiegelberg in the Gynecological Section of the Natural Science Meeting at Wiesbaden (*Archiv f. Gynæk*, Bd. vi. Heft 2). The three forms of contracted pelvis which we meet in practice are:—1. The simple flat pelvis (of ricketty origin or not). 2. The uniformly and generally contracted pelvis. 3. The generally contracted flat pelvis. The latter of these is more frequent than the second. In the first form it is the anterior part of the vulva which presents at the entrance of the pelvis. The chin is easily removed from the chest, the large fontanelle comes lower than the small, the coronal suture approaches the conjugate, the bi-parietal diameter is on the opposite side; in a word, it is the anterior part of the vertex which presents. The mechanism of the passage of the head consists of two movements, one about the fronto-occipital axis, the other about the transverse axis. The sagittal suture comes forward, the occiput goes more deeply backwards. Labour may take place spontaneously. If the condition of the mother necessitates an operation, it is only exceptionally that the forceps will be of use; as a rule the head must be lessened. If the difficulty is recognised sufficiently early version should be performed.

The course of labour in the second form is quite different from the above. Here the head when it enters the inlet meets with an obstacle in all its circumference. The head is strongly flexed, and enters the cavity of the pelvis, faithfully represented by a wedge. The face is directed to the fundus of the uterus, and the occiput is the presenting part. In such cases we must dread impaction of the head. If such occurs we must have recourse to craniotomy as early as possible. The forceps should never be used. In the third form we have the anterior part of the head or the occiput presenting at the inlet according as the flattening or the general contraction predominates. At times also the head is engaged in a position inclined to one side, and consequently a presentation of the ear. If this condition is recognised early, version should be performed, but if the width of the pelvis is not sufficient to succeed, perforation should be performed as soon as it is evident that the head cannot be adapted to the pelvis. In contraction of the pelvis it will often be

necessary to perforate; version must be reserved for certain cases, and the use of the forceps rejected. If craniotomy is necessary, it should be performed as early as possible to avoid the injurious effects of pressure. Spiegelberg employs the trepan for perforating; for extracting, the cephalotryptor, or the cranioclast.

Gynecic Summary.

Thermometry of the Uterus.

At a meeting of the Vienna Medical Society (reported in the *Allgem. Zeitung* of March 10), Dr. Schlesinger delivered an address on "The Thermometry of the Uterus, and its Diagnostical Significance." The question he wished to treat was, whether, by aid of the thermometer, we are enabled to diagnosticate those difficult cases wherein all other means fail us—viz., the early months of pregnancy. In favour of the possibility of doing so is the admission that the temperature of the fetus in utero is higher than that of the mother, and that the greater warmth of the uterus than that of the vagina in pregnancy is derived from the contact of the fetus. In illustration of this point he referred to the experiments of Bärensprung upon fowl's eggs, rabbits, dogs, and the human subject. He found that the development of the chick was accompanied by an increase of temperature of 0.3° C.; and that when the thermometer was in rabbits and dogs placed within the uterus, within the cavity of the pelvis, and within the cavity of the abdomen, the temperature in the pregnant animal attained its maximum within the cavity of the uterus. In six cases he found that the temperature of the human fetus was higher than that of the mother, and communicated heat to the uterus. Schroeder found also, on introducing the thermometer into the uterus three or four days prior to parturition, that the temperature was higher there than in the vagina and axilla, and he agreed with Bärensprung that this higher temperature was derived from the fetus—a view which was confirmed on finding that the temperature of the newborn infant was higher than that of the mother both during and after delivery. This conclusion was remarkably confirmed in a case in which the child died seventeen hours before birth, and there was only a difference of 0.02° C. between the temperatures of the uterine cavity and the axilla, whereas this had amounted during pregnancy to 0.9° C. In a protracted breech-presentation the first measurement furnished a temperature of 38.9° in the vagina, that of the fetus being 39.4° ; and two measurements towards the end of the labour gave 39.1° in the vagina and 39.65° for the child, and 38.8° in the vagina and 39.55° for the child. From these and other observations Schroeder deduced the following rule:—If the temperature of the pregnant uterus is higher than that of the vagina, and if such excess is derived from the warmth produced by the fetus; and if with the

death of the fetus this source of caloric is dried up, and the uterus must impart it to the dead mass, we may infer that the death of the fetus has taken place when the difference between the temperatures of the uterus and vagina entirely ceases, or exists only to a very slight extent.

More lately this proposition has been expanded by employing the thermometer as a means of diagnosing pregnancy during the early months when aid is so much required. Before any positive conclusion could be drawn, it became necessary, however, to ascertain whether there is any difference between the temperature of the uterus and the vagina in the non-pregnant condition. Dr. Schlesinger has made several investigations by means of a new thermometer which he has contrived, and has found a difference between the temperatures of the axilla and vagina of 0.21° C., and between those of the vagina and uterus of 0.16° C., so that there is a higher temperature of the uterus in non-pregnant as well as in pregnant women. In a comparison of the temperatures of the rectum, vagina, and uterus, the two latter exhibited a slightly higher temperature, that of the cavity of the uterus being also higher than that of the cervix. The general result of the investigation is that the uterine cavity, both in the pregnant and the non-pregnant conditions, possesses a higher temperature than the vagina, but the gravid uterus is of a higher temperature than the non-gravid, and the parturient uterus is of a higher temperature than the non-parturient.—*Medical Times and Gazette.*

Retrogression of the Graafian Follicles.

M. Slavjansky (*Archives de Physiologie*) writing on this subject says as follows:—1. The Graafian follicles are developed from the primordial follicles, and acquire a greater or less degree of maturity during the whole of life from the first month after birth till about forty years of age. 2. The greater part of the follicles are not ripe, do not burst, and do not discharge their contents, but undergo atresia, presenting an almost complete analogy with that of the formation of the corpora lutea. 3. The development and maturation of the Graafian follicles are not produced periodically in a regular manner, and no connexion exists between them and menstruation. 4. Menstruation constitutes a physiological phenomena, quite independent of the development and maturation of the follicles. 5. The rupture of follicles more or less mature always bears a certain relation to congestions of the genital organs, produced by any cause whatever. 6. There exist certain maladies (ague, poisonings, &c.) which produce atresia of the follicles at different periods of their development, after a parenchymatous inflammation of the ovaries.

A New Sign of Death.

Monsieur Bouchut has communicated a note to the Académie des Sciences of Paris, on a new sign of death, which consists of pneumatosis of the retinal veins. This phenomenon, which is readily appreci-

able by the ophthalmoscope, is due to the disengagement of the gas which is normally imprisoned in the blood.—*Journal de Médecine*, April, 1874.

Esthiomène, or Lupus of the External Genital Organs.

Clinical Lecture by Dr. BERNUTZ, at l'Hôpital de la Charité, Paris.

Dr. Bernutz had seen five cases in about twenty-five years. M. Huguier had seen a larger number, but this was quite exceptional. Dr. Bernutz considered the disease as completely analogous to lupus of the face. The only differences were those due to anatomical dissimilarity of the two regions, a dissimilarity which aggravated the prognosis of genital lupus. This dissimilarity was well set forth by M. Huguier in his classical writings on the subject. Like lupus of the face, genital lupus may destroy the superficial or deep parts, or may determine hyperplasia of the parts it occupies; its character is commonly serpiginous, and it oscillates, so to speak—healing on one side, and progressing towards ulceration on the other.

Dr. Bernutz resorts to operation, the topical and internal use of iodine, the administration of arsenic, cod liver oil, &c., and good diet.

Pædiatric Summary.

Hæmorrhage in the Newly-Born and Children at the Breast.

By Dr. A. PEUCH.

In our day, with the ideas prevailing in science, one has difficulty in understanding that the facts of which we are about to speak have been signalized as examples of true menstruation, and interpreted as positive proofs of precocity. However unlikely that may appear, the thing is nevertheless strictly exact, and I do not exaggerate in saying that they figure in science under this denomination, and that they are for the most part announced under this erroneous title. To cite an immediate proof, in an American journal which appeared in 1873, I found a case by Dr. Holmes thus entitled.

Without being very common, these hæmorrhages are always much more frequent than the documents appearing in the journals of our day would lead us to suppose. For example, the entire collection of the *Gazette Médicale* and that of the *Gazette des Hôpitaux* consulted, so to speak, page by page, furnished only four examples, whilst in my own practice I have collected half a dozen. Have I been favoured in this? To speak frankly, I think not. I incline rather to believe that the rarity of observations published bears no relation to the infrequency of these accidents, but to a sound and legitimate appreciation of their value. Since the time when physicians no longer saw extraordinary cases in these hæmorrhages belonging to the marvellous, since the time when accoucheurs in general and Desormeaux in particular (*Dict. des Sciences Médicales*, 2^e Edit. t. xix. p. 445),

suspecting their menstrual character, established rightly their incontestably morbid physiognomy—since that time, I say, our contemporaries have been less careful to publish examples, and to encumber, by relating them, medical journals, as was the case formerly, witness the numerous cases existing in the collections of the eighteenth century, and notably in the “*Ephemerides du Curieux de la Nature*.” However interesting this study may be for the accoucheur and the physiological physician, it has not received all the developments of which it is capable. Because of the mediocre importance of these hemorrhages, we restrict this note as much as possible, and in place of relating *in extenso* the observations we have collected, we confine ourselves to analysing succinctly and giving prominence to the salient points of their history.

I.

Hemorrhages in the Newly-Born.

Hemorrhages which appear by the vulva during the first eight days following birth, have a physiognomy so distinct from those which may appear later that I have considered it useful to give a separate description of them. In the cases which I have observed, as in those I have read, there was nothing either in the circumstances of the birth, in the antecedents of the mother, or in the state of the children themselves, which served to explain this unusual particular. I confine myself simply to the statement of the fact that it may arise in all imaginable conditions. It has been noticed in effect, as well in children the offspring of multiparous mothers as in those the offspring of primiparous mothers; it has come on after a slow birth as well as after a quick birth; after a vertex presentation as after a breech presentation; after a natural delivery as after one terminated by the forceps. As to the child, it may be, indifferently, weak or strong, feeble or vigorous, born at full term or prematurely; in fact, after much research, I am forced to confess my complete ignorance of the predisposing causes in the production of this accident.

The symptomatology is exceedingly simple, and so little varied that within a few shades nearly all the cases resemble one another. This similitude has determined me in suppressing an exposition of them, so as to avoid repetition to the most fastidious. Generally before the appearance of the hemorrhage the child is restless, cries and moans almost incessantly; sleep is unquiet and frequently disturbed; the breast is quickly enough taken, but as quickly let go; sometimes, even, it is completely refused. The abdomen is habitually distended, and the seat of borborygmi; the stools are infrequent and moderately copious, and the feces, more often green than yellow, are expelled with pain. The urine is equally scanty; once, indeed, there was retention. On examining the genital organs the vulva is slightly swollen, and found to be the seat of a white and viscous discharge. Twenty-four hours afterwards, or even sooner in some cases, it becomes reddish and sanguinolent before giving place to a flow of nearly pure blood. At this time the vulva is more swollen.

These prodromic phenomena are constant, and are heightened in the majority of cases : they may, however, be wanting. Thus, in a child born at the seventh month in the first breech position hemorrhage seemed to have suddenly appeared, but as it was impossible for me to examine the wrappers which enveloped the child before the appearance of the hemorrhage, I have placed this particular in a doubtful form.

However it may be, the mammary glands are simultaneously more or less engaged, and furnish some drops of lactescent serosity on pressure. I have met with this engorgement in all the cases, but still there are some observers who have not noted it, or have not thought much of it until after the termination of the hemorrhage. Whether this is because the phenomena did not really exist, or whether it was because it was not sought after, I naturally am unable to decide.

The appearance of the hemorrhage is always made before the fall of the navel string, and most commonly from the fourth to the sixth day ; meanwhile it may appear before, but only exceptionally. I only know of two examples. Mons. Bonnal (" *Mémoires et Bulletins de la Société de Méd. de Bordeaux*, 1869," p. 83) met with it in an infant aged twenty-six hours. The swollen breasts were of the size of a walnut. The external genital organs were tumefied : nevertheless, the child, which was pretty well, took her mother's breast perfectly well. As regards the delivery, it was simple, but very rapid. M. Bonnal had the child bathed in lime-tree water, and soon observed that the flow began to diminish at the same time as the breasts began to lose their volume. Forty-eight hours afterwards everything was right again. In another case, in which the expulsion of the child was very slow (forty-two hours) I saw the flow set in at the beginning of the third day, and disappear, as if by magic, after a duration of twenty-seven hours. Before and during the hemorrhage the child was extremely uneasy, and obstinately refused the breast. On account of this circumstance, and because of the relative abundance of the flow, I was not without some apprehension as to the result, when, at the end of the fourth day, after the cessation of the hemorrhage, she took the breast with avidity. Whether it has been preceded by the prodromata above-mentioned or no, the hemorrhage has in all cases an absolutely identical character. The blood when it appears is moderately deep in colour, a circumstance which may be explained by its mixture with the mucus secreted by the genital passages. The congestion of which these organs are then the seat causes to all appearance a higher secretion of mucus. I have never met with little clots, and in the thirty cases on which this note is based I have found only one exception. In this case, collected by Muller, there were numerous borborygmi, followed on the morrow by hemorrhage. During its stay, which was three days, the external genital parts were swollen, and behind the hymen blood was found coagulated in the vagina. Fourteen days later the hemorrhage came on again, and disappeared definitively at the end of seventy-two hours.

This we may remark in passing is quite an exceptional case, not only from the existence of clots behind the hymen, but also from the circumstance of the reproduction of the hemorrhage at the end of a short space of time.

The flow of blood is not by jet but drop by drop as by a sort of perspiration. It does not come from the vulva, but from the interior of the vagina as I have assured myself by sponging the genitals with tepid water. After having thus cleansed the vulva, one sees issue from the posterior border of the hymeneal fissure a drop of blood, which is followed more or less quickly according to the case by a fresh drop, and so on until the complete cessation.

Generally the drops follow one another pretty closely at the beginning, and then less frequently on the contrary when the hemorrhage approaches its natural termination. The quantity of blood thus expelled in the twenty-four hours is very variable, and is very difficult to estimate. Looking at it in a general way and making allowance for the exaggerations of its surroundings, it appears to me to be pretty nearly equal whatever its duration.

Thus in the infant in whom it ceased at the end of twenty-seven hours, it was as considerable as in two others when it persisted for five whole days. In a case related by Jacob (*Gazette des Hôpitaux*, 1858, p. 387) the amount was estimated at about two cubic centimetres in the twenty-four hours. It has been impossible for me to arrive at anything like a rigorous appreciation; all that I can say is, that in amount the quantity of blood lost is but little.

The interval of time during which it occurs is extremely variable; usually it persists for four or five days, but sometimes its duration is less, as in the case of the child spoken of above, and as in that of which M. Bonnal has related the history.

With the disappearance of the hemorrhage the symptoms already named vanish; the cries cease, the agitation is calmed, and the sleep becomes tranquil and regular. The mucous flow which succeeds to the hemorrhage ceases in its turn with the swelling of the genital organs. It is the same with the turgescence of the mammary glands which sometimes, notwithstanding, persists for a longer time. Briefly, in less than six or seven days every thing has returned to the normal state.

Whatever may have been their duration, and in whatsoever conditions they may have declared themselves, these hemorrhages, contrary to hemorrhages of the umbilicus, are not grave, and have always been followed by cure.

The treatment used has generally been nil or insignificant, in any case it has consisted of general baths of marsh-mallow or lime-tree poultices, sprinkled with Goulard water. Is it desirable to have recourse to more energetic means? I do not think so in any event, and this opinion is suggested on the one hand by the slight gravity of such cases, and on the other by the idea of the circumstances which produce them.

Everything considered, these are passive hemorrhages connected

with congestion, of which the abdominal organs, but especially the genito-urinary system are the seat. On account of the sudden change brought about in the circulation of the blood by the birth of the fetus, it may in certain conditions produce accumulations of blood, true congestions. If it is difficult at present to tell the particular conditions which favour these sanguineous stases, still it is evident that if this hypothesis has any foundation, the hemorrhage which occurs in the earlier days after birth is an essentially curative phenomenon, which ought to be watched but not combated. Unloading these organs of their too abnormal fulness, it follows that they constitute a natural means of dejection; they become in fact a true advantage, and not at all an inconvenience.

Criticism may pronounce on the more or less accurate foundation of this view, but whatever its judgment, it cannot revive the hypothesis which considers these hemorrhages as precocious menstruations. This hypothesis has had its day, and does not deserve the honours of discussion.

II.

Hemorrhages in Children at the Breast.

At the risk of incurring the reproach of multiplying divisions, I have set aside a special paragraph for the hemorrhages which may come on after the first few months of life, for they are connected with other conditions, and are not to be interpreted in a similar manner.

Referring to my personal practice they are much more rare than the preceding; therefore in default of sufficient clinical documents, the reader will find here rather an indication than a description.

Setting aside pseudo-menstruations or periodical metrorrhagias which are in a certain manner compatible with health, these hemorrhages are symptomatic of divers lesions, and may according to the conditions be followed by death. The hemorrhagic phenomenon is here accessory, a complication most frequently ultimate whilst the lesion which precedes it is the primordial fact.

This pathological incident may depend on a local or general state.

Among other examples belonging to the first category we may cite the case of Traetzel (*Allg. Wien. Med. Zeitung*, 1863, No. 30), relative to an infant of sixteen months. The hemorrhage here was symptomatic of a vaginal polypus of the size of a man's thumb. The pressure which it exercised had at the time of the operation caused retention of urine and feces. The growth came away the sixth day after the ligature of the pedicle.

Hemorrhages belonging to a general state have not so happy an ending. If their appearance is a new proof of a profound decomposition of the blood, of a considerable depression of the radical forces of the infant, their cure has up to the present time been rather hoped for than obtained. I have twice had this sad experience. The first case was that of a little girl of ten months, wasted by an

obstinate diarrhea which lasted all the summer. The hemorrhage, at first insignificant, appeared to yield to the exhibition of ergotine in raw meat; but three days after it recurred, and was followed by death at the expiration of twenty-four hours. In the second case, met with this autumn, the child, aged fifteen months, was weaned, when she showed symptoms of jaundice, resembling in its course the grave jaundice of adults. The gums became fungating and bled, while at the same time hemorrhage showed itself at the vulva with an olive tint. These phenomena preceded death by twelve hours. It is regrettable that an autopsy was not made, but one is authorized in thinking that there was in this case a profound alteration in the hepatic organ.

I need not insist on this point. In another article I will conclude this study by examining pseudo-menstruations and true precocious menstruations. The matter is assuredly small, but it is not without interest.—*Gazette Obstetricale.*

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

“Ueber die hauptsächliche Richtung und Ausdehnung der Retraction des Uterus, besonders zur Zeit der Völligen Entleerung des Schwangeren Organs.” Von J. Matthews Duncan.

“The Annual Discourse before the Massachusetts Medical Society,” by Nathan Allen, M.D., LL.D. Boston, 1874.

“On certain Improvements in the Hinged Short Forceps.” By Francis Vacher. 1874.

“The Use of the Seton in the Treatment of some cases of Chronic Affections of the Womb.” By Ely Van de Warker, M.D. New York, 1874.

“Transfusion.” By James R. Chadwick, M.D. Boston, 1874.

“The Harveian Oration for 1874.” By C. West.

NEWS.

Miss Ellen M. Greenstreet has, under the new bye-law of the King and Queen’s College of Physicians in Ireland, obtained the licence to practise as a midwife and nurse tender. The important question may now arise as to whether this licence is registerable.

Communications have been received from Dr. H. Beigel, Vienna; Dr. Atthill, Dublin; Dr. Matthews Duncan, Edinburgh; Dr. Nathan Allen, Massachusetts, U.S.A.; Dr. Wiltshire; Dr. Carter; and from Drs. Cullingworth, Manchester; Myles, Limerick; and Chadwick, Boston, U.S.A.; whose communications shall appear in our next number.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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OF
GREAT BRITAIN AND IRELAND.

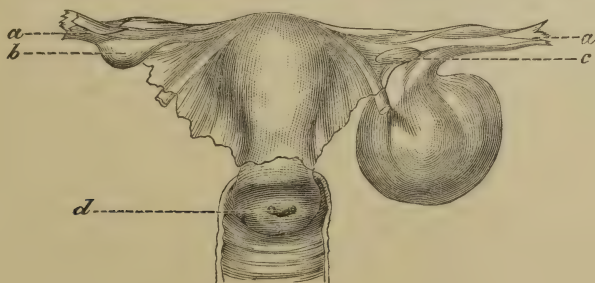
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No. XIX.—OCTOBER, 1874.  
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OVARIAN CYST IN AN INFANT NEWLY-BORN.

By CHARLES J. CULLINGWORTH,

Surgeon to St. Mary's Hospital for Women and Children, Manchester.

ON the 24th January, 1874, I was called upon to make a post-mortem examination of the body of a newly-born female child, whose mother was a domestic servant, and was to be taken into custody on a charge of concealment of birth.



OVARIAN CYST IN AN INFANT NEWLY BORN.

- a a.* Fallopian tubes. *b.* Right ovary.
c. Left ovary, with cyst attached. (The cyst is turned downwards in the drawing to display the ovary.)
d. Os uteri.

The body was that of a well-nourished infant, at or near the full term. There were no marks of violence. The cord had been torn across at a distance of about an inch from its termination in the child's body, and at the line of junction with the body there was another rent partially detaching it.

The lungs had not been fully inflated, but portions floated freely on water ; and as delivery was accomplished without assistance, and the child received into a *pôt de chambre* and left there without any tendance, it is probable that the cause of death was suffocation. The post-mortem examination, however, proved to be of considerable scientific, if not of very great forensic interest. On examining the interior of the abdomen, I noticed a cyst in the left iliac region, which led me to remove the genital apparatus entire, and hand it over for minute investigation to my friend Dr. Julius Dreschfeld, assistant-physician to the Manchester Royal Infirmary, whose elaborate and careful report I have the privilege of appending :—

Report by Dr. Dreschfeld.—"The parts submitted to me for examination consisted of the sexual organs of a newly-born female child, and appeared healthy and normal, except the left ovary, which only measured 4 mm. in length, and appeared as an appendage to a cystic growth, of the size of a large cherry, springing from the internal border of that ovary. The length of the anterior surface of the uterus was 24 mm., its cavity measured 20 mm., and the fundus had a width of 12 mm. The length of the right Fallopian tube was 20 mm., and that of the left 21. The right ovary measured 14 mm., and had a width of 3 mm., while the left ovary was only 4 mm. long. From the junction of the upper with the inner border of the left ovary sprang the cystic growth before mentioned, measuring 48 mm. in circumference taken in a vertical plane, and 40 mm. in circumference in the horizontal plane. The cyst was unilocular, of a globular form, of smooth exterior, and semi-transparent. It was connected with the left ovary and broad ligament by a somewhat flattened base, measuring 6 mm., passing thence through a somewhat narrower neck into the general body of the cyst. It was covered in its entirety by peritoneum, and blood-vessels were seen passing along its walls.

"With the view of disturbing the parts as little as possible, a few drops of the contents were drawn off by a subcutaneous injection syringe and examined. The drops thus removed consisted of a thin, reddish, serum-like fluid, of slightly

alkaline reaction, not coagulable spontaneously, but coagulating on the application of heat. The microscopical examination revealed the presence of a quantity of granular matter, free nuclei, lymphoid cells with granular contents and large nuclei, and a large number of cylinder-cells with a somewhat pointed base. Some of these cylindrical cells contained granular matter, in some places semi-transparent, and in others dark. They all contained a well-formed large nucleus, lying mostly near their broad free border. A thin section of the left ovary showed it to be of normal structure, containing in its stroma well-formed ovisacs (Pflüger's tubes). Between the upper border of the ovary and the Fallopian tube a number of small tubes with club-shaped extremities were seen, evidently the remains of the Wolffian bodies. Thus the contents of the cyst, as well as its situation, point to the conclusion that it is ovarian, and that it had for its centre of formation a Graafian follicle."

NOTES OF SOME CASES OCCURRING IN OBSTETRIC PRACTICE.

By MONTAGU PALMER, M.R.C.S. Eng., &c.

A Case of Eclampsia occurring at the Fifth Month.

MRS. B., a well formed-woman, advanced to the fifth month in her first pregnancy, aged thirty-three, consulted me for what appeared a bilious attack; complaining of headache, and a feeling of tightness in the abdomen, with vomiting of bilious-looking matter. Saline mixture, with compound rhubarb pill, gr. x, was ordered at bedtime.

I called the following day at 10.30 A.M., and found the patient in convulsions, the pupils dilated, but acting feebly. There was *no swelling of legs*, nor had there been any from the first. Ordered pot. bromid. gr. xxx, codeia gr. j, ex aqua, 4^{tis} horis.

She had four convulsions between 10.30 A.M. and 4 P.M. Very little if at all sensible in the interval. At the last-mentioned time she had very severe convulsions, and the

tongue was almost divided. Chloroform was administered, and the bowels were acted upon by turpentine and castor-oil enema. She was kept under the influence of chloroform till 7 P.M. The urine examined was loaded with albumen. It was decided to empty the uterus. The os being dilated to size of the tip of the finger, the smallest hydrostatic dilator was introduced and gently distended. In one hour and a half sufficient dilatation was obtained to admit the short forceps through the os. They were employed in preference to long forceps, from the breadth of the blade, there being not more than $1\frac{1}{2}$ inches. A small male child was extracted of apparently little if any more than five months. The patient was not conscious till the middle of the next day. No convulsions occurred after delivery. Convalescence was retarded by attacks of diarrhea and slight pelvi-peritonitis. The albumen disappeared at the end of the second week. The patient is at the present time pregnant, and there is also a trace of albumen.

Case of Occlusion of Os.

Mrs. C., aged twenty-two, in labour with her first child. Pains occurred for two days previously to sending for me. On first examination I could detect some slight depression in the place of the os. I next saw her in six hours, and again examined more carefully, giving chloroform, and introducing my hand, but was still unable to discover any os. I then called in my father, who likewise could only discover the depression. The portio vaginalis was extremely thin, probably from the pressure of the head. The patient having been seen by another medical man, who acquiesced in the diagnosis formed, it was decided that an incision should be made at the point indicating the situation of the os. But during a pain the thin portion which was occluded was torn by the finger, and the os thus formed was found to be gradually dilating, and was of an irregular shape. It was now decided to leave the case to nature for a time, and labour continued eight hours; but although the os became fairly dilated, the head made no advance. Long forceps

(Barnes's) were therefore used, and after some considerable amount of traction being employed, a living child was delivered. The case appeared to be one of occlusion by membrane stretching from side to side of the cervical canal, and so preventing the proper dilatation. No history could be obtained to account for the condition of parts. Mother and child did well.

DEATH FROM SYNCOPE TWO HOURS AFTER UNAIDED PARTURITION.

By GEORGE MYLES, L.R.C.P.,
Visiting Physician to the Limerick Lying-in Hospital, &c.

ON Sunday morning, April 5th, I was called at 9.20 to see Mrs. C., aged forty-one, in labour of her tenth child. I reached the house at 9.50, and found child and placenta attached expelled. The nurse did not arrive for half an hour after I reached the house, but an intelligent servant informed me the child had been born fifteen minutes prior. I found the uterus perfectly contracted, no trace of hemorrhage beyond what is usually lost, and her general condition perfectly quiet.

After bandaging her securely, a well-adjusted pad being placed over the uterus, I admitted her husband, who congratulated her on her safe delivery. He remained for about twenty minutes, and then left the room. Five minutes had scarcely elapsed when I noticed some pallor coming over her face. Thinking hemorrhage might have been the cause, I examined carefully, and found none externally; then I opened the binder, and removed the pad with the same result. The uterus was well contracted. At this time the faint was well marked. I then gave tablespoonful doses of brandy with volatile ammonia, and applied sinapisms over the heart and calves of legs. At the end of thirty minutes she began to revive, which was marked by vomiting of hard boiled egg and seed-cake. During this faint I thought she had died. The rally continued about thirty minutes. She then wanted to be raised in bed, and complained of want of

breath. A pallor came over her countenance. I again examined for external and internal hemorrhage, and found none. During this examination she grasped my neck and raised herself upright. I immediately put her in a recumbent position, plied her with brandy again, and ammonia and beef tea. I called a consultation, but notwithstanding our united efforts she never rallied from this. Half a bottle of brandy and half an ounce of volatile ammonia were used. I may mention she was an anemic woman. She suffered from mucous diarrhea for a period of two months (the sixth and seventh), which injured her general health very much. Beyond a weak heart, I could find no other evidence of disease.

* Can you, or any of your readers, give any insight into this case?

Reports of Hospital Practice.

ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.

POST-SCARLATINAL DROPSY—EDEMA OF LUNGS— ACTION OF DIGITALIS—RECOVERY.

Under the care of WM. STEPHENSON, M.D., F.R.C.S. Ed.

FRANK M., aged four and a half years, admitted June 30th, 1874, to scarlet fever ward, suffering from swelling of face and legs, with very dark urine. Had a mild attack of scarlet fever three weeks before. History of phthisis and hydrocephalus in the family. The boy is well grown and nourished.

July 1st.—There is slight edema of the face, colour pale but clear, no flush, no marked dryness or heat of skin. Pulse feeble and rapid (118). Urine dark and bloody. Breathing quiet and regular, but at the end of each inspiration a distinct effort, with indrawing at root of neck, is observed before the act is completed. Percussion note posteriorly not good, and less resonant on the right side.

Subcrepitant râles, thin and watery in character, are heard freely at the right base, and occasionally on the left, on which side the respiratory murmur is free and natural, but on the right side the inspiratory murmur is deficient and the expiratory prolonged. Has a slight cough. Bowels not moved since admission. Urine 14 oz. ; opaque, bloody, with débris. Ordered P. Jalapæ Co. gr. xx, to be repeated in the morning if necessary. Infusion of digitalis ʒj every six hours. Turpentine fomentations to the chest. Diet, beef tea and milk.

July 2nd.—During the night had an attack of dyspnea, which compelled him to sit up in bed. To-day the effort in breathing is more marked. Chest much the same. Bowels moved freely. He has vomited once.

July 3rd.—Had another attack of dyspnea during the night. Râles very abundant in chest, but no bronchial breathing ; dulness not increased, but is perceptible in front on right side. He has vomited several times. Stop digitalis, on account of the vomiting, and give Tr. Belladonnæ mʒ ter in die. Gin ʒiv in diem.

Vespere, 8 P.M.—Has just had a fit, which lasted only a few minutes. The eyes were fixed and squinting, pupils dilated, body somewhat rigid, but not convulsed, breathing irregular. Pulse very feeble, cannot be counted.

July 4th.—Had a quiet night, no return of the fit or of attack of dyspnea. Breathing still laboured. Chest signs unchanged. No vomiting. Bowels moved three times without a powder. Pulse still very feeble ; cannot be accurately counted. Continue the belladonna.

July 5th.—A marked improvement is observable in the general appearance. Edema of face diminished, but marked in the feet. Breathing freer and quieter, but still a slight effort, causing indrawing at root of neck.

Chest.—Copious thin mucous râles at base of both lungs, most on right side ; respiratory murmur freer than formerly over the whole lung. Pulse still very feeble. Taking his food better. The turpentine fomentations have been constantly applied.

July 6th.—Improvement continues ; breathing freer ; looks more lively ; swelling of feet less marked. Pulse stronger,

can be more readily counted. Dulness and râles as before. No bronchial breathing.

July 7th.—Expression of face greatly changed, swollen, pasty, and unhealthy in colour. Breathing more laboured. Pulse cannot be counted at the radial; at the heart 136. Heart's action without tumult; sounds distinct.

Chest.—*Right* side, back: inspiratory murmur very deficient; expiratory loud and prolonged, with considerable rhonchus and sibilus. *Left*: inspiratory murmur good; expiration prolonged; less rhonchus, but occasional slight crepitation. Urine very dark and bloody, with copious deposit. Last night, the pupils being dilated, the belladonna was stopped. Return to the digitalis. Back of chest and loins to be dry cupped, to be followed by strong turpentine stupes.

July 8th.—Vomited the first dose of digitalis, but has retained it since. Rested well during the night. General condition as unfavourable as yesterday. Eyes almost closed with edema. Breathing very laboured; chest signs the same. Quantity of urine greatly diminished (see chart).

Vespere.—General condition unchanged. Breathing very uneasy, but he can still lie with a high pillow. Is restless, and changing his position frequently. The pulse feels somewhat stronger and countable—the only sign of encouragement; it is 24 hours since the digitalis was begun. Increase the gin to six ounces.

July 9th.—Has spent a pretty good night, and looks much better this morning. The breathing is easier; air enters more freely throughout the chest; abundant subcrepitant râles on left side. Pulse much stronger. Urine slightly increased in quantity, very dark, smoky, throws down a very copious and dense deposit of albumen.

Vespere.—Improvement continues. No vomiting. Swelling of face greatly diminished.

July 12th.—Improvement continues; edema gone; respiratory murmur good over the whole chest; resonance improved; still some moist râles.

July 13th.—Again not so well; pasty in colour; vomited this morning; pulse much feebler. Stop digitalis; give

Date.	Temp.	Pulse.	Resp.	No. of motions by the bowel.	Urine for previous 24 hours.	REMARKS.
June 30, E.	100'4	118 ?	—	0		
July 1, M. E.	99'8 100'6	112 ? 120 ?	— —	0 0	14 oz. Albm. blood.	P. Jalapæ Co. gr xx. Infusion Digitalis, ʒj 6 q. q. h. Turpentine fomentations.
" 2, M. E.	99 99'4	112 120	— 38	1 4	14 oz. "	Vomiting.
" 3, M. E.	98 98'4	118 72 ?	— 34	0 3	18 oz. "	Vomiting continues. Stop Digitalis; give Tr. Belladonnæ m v ter in die. Gin ʒiv.
" 4, M. E.	98'8 98'2	100 ? ?	— 38	1 2	24 oz. Albm. Colour clearer.	Had a slight fit. No vomiting. Pulse very feeble, cannot be counted.
" 5, M. E.	100 99'6	112 100	34 34	3 4	34 oz. Smoky, $\frac{1}{2}$ Albm.	Pulse counted with dif- ficulty.
" 6, M. E.	99'4 99'6	96 100	32 36	2 2	32 oz. Sp. gr. 1010. More Smoky.	Pulse stronger, can be readily counted. Increase Belladonnæ to 8 drops.
" 7, M. E.	99'6 99'6	96 ? 122 ?	36 42	1 4	29 oz. Sp. gr. 1012. Very dark.	Decided relapse. Pu- pils dilated. Stop Bella- dona. Return to Digi- talis. Dry cupping. Pulse very feeble.
" 8, M. E.	100'6 98'4	128 ? 104 ?	42 28	1 2	18 oz. "	
" 9, M. E.	97'8 98'2	112 100	30 26	1 3	22 oz. Albm. $\frac{1}{2}$. Dense deposit débris.	Pulse stronger, more easily counted.
" 10, M. E.	98'2 99'8	116 100	30 —	0 0	24 oz. Clearer.	
" 11, M. E.	100 99'2	112 118	— 28	3 0	28 oz. Albm. $\frac{1}{4}$.	
" 12, M. E.	100 100	108 112	30 30	0 2	26 oz. "	
" 13, M. E.	100'4 100'6	112 108	36 42	0 0	25 oz. Albm. $\frac{1}{8}$. Copi- ous débris.	Not so well again. Vomiting. Stop Digitalis. Change to Quin. and Ferr.
" 14, M. E.	100'2 99'8	120 112	44 36	0 0	28 oz. "	
" 15, M. E.	100 100'2	104 108	34 36	1 1	26 oz. "	
" 16, M. E.	100'2 99'6	108 104	— 32	0 2	28 oz. Albm. dimi- nishing.	
" 17, M. E.	101 100'2	104 104	— —	2 0	52 oz. Much clearer, red colour.	
" 18, M. E.	100 100'2	80 116	— —	2 0	37 oz.	
" 19, M. E.	99'6 99'8	88 90	— —	1 2	39 oz. A trace of albm.	
" 20, M. E.	99 4 99'8	84 96	— —	1 —	42 oz.	

quinine and iron, with acid citrate of ammonia. To have the white of two eggs in addition to beef tea and milk.

July 14th.—Slightly improved. Respiration good. Still some râles. Urine opaque, pinkish red, highly albuminous.

July 15th.—Decidedly better; pulse much stronger. From this date the patient steadily improved.

Remarks.—This case presents many points of interest. Acute edema of the lungs is one of the rarer forms of post-scarlatinal *sequelæ*. In the milder form of it, as in this case, it is perhaps not so rare as is supposed, the lung lesion being regarded as pneumonic. That this was edema from the first is evident when all the features of the case are taken together. The general state was primarily anasarcous, the range of temperature was not pneumonic. The character of the respiratory movement and the attacks of dyspnea, the absence of bronchial breathing, the respiratory murmur being altered more in degree than in kind, the thin nature of the fluid producing the râles, and the feebleness of the radial pulse compared with the distinct heart's action, all point to edema primarily and solely.

Such being the diagnosis, and considering the pathology of the affection, digitalis* is the remedy clearly indicated. Concerning its action the chart bears clear evidence. From the difficulty in counting the pulse with accuracy so frequently experienced in this case, I prefer to draw no conclusion as to the action on the pulse rate, but there was undoubted improvement obtained in the strength. Digitalis, it is known, often causes vomiting after it has been administered for a short time. On account of the presence of this symptom we had twice to stop the remedy. I do not mean to say it was the cause in the first instance, but vomiting being present, it was advisable to discontinue its use. Belladonna was selected to take its place for its stimulant action on the vascular system (Harley). I have used it in

* For special reasons, apart from the case, I gave it alone; it might very advantageously from the first have been combined with iron.

similar cases before, with apparently good effect. Here I simply wish to note it and draw no conclusions.

A decided fall in the temperature occurred on both occasions immediately after the administration of the digitalis. Was this due to the remedy? At first sight it would appear to be so. On the second occasion, however, it must be remembered that the fall in temperature corresponds with the very severe relapse which occurred, with all its depressing influences; and in the first instance it was also when the affection was at its worst. With improvement the temperature again rose on both occasions to the mean of about 100 degrees. I prefer therefore to regard the fall as due to the disease, and not the remedy.

The action sought for was improvement in the strength of the pulse, and of this there was distinct evidence. On the second occasion I distinctly observed the improvement twenty-four hours after the digitalis was begun; and that is the time I have frequently noticed when its effect becomes perceptible. This faint indication was sufficient amid all the other most gloomy forebodings to enable me to express a favourable prognosis, which fortunately was realized.

On the 13th the patient was again threatened with a relapse. The pulse again began to flag. This was in all probability due to the vomiting, which, this time, was likely to be due to the continued use of the digitalis. The dose (5j) may by some be considered large, but it is that which from experience I have been led to adopt where a speedy action is requisite; the error lay in continuing it too long after the improvement had been attained. For the action on the secretion of urine see chart.

Another danger threatened during the severe relapse—viz., the deadening effect on the nervous system of the retained carbonic acid. This condition, I believe, is best combatted by sharp stimulating impressions upon the peripheral nerves, and for this purpose strong turpentine stupes, repeated at intervals, is one of the safest and readiest remedies. The milder form first employed was for a general and continued stimulating action to the chest.

In conclusion, whilst the treatment adopted can be sup-

ported by well founded physiological principles, like reasons could be assigned to prove that a saline, diuretic, or diaphoretic line of treatment is directly contra-indicated in such cases where the primary element of the affection lies in a debility of the vaso-motor system, and where the kidney affection is but part of a general systemic derangement—a common result, and not, as frequently regarded, the cause of the more general symptoms.

General Correspondence.

OVULATION AND MENSTRUATION.

(To the Editor of "*The Obstetrical Journal*.")

SIR,—As German and Russian physiologists are reviving the idea (apparently claiming for themselves the origin of it) that menstruation is not necessarily connected with ovulation—the former being a periodic function of the uterus, the latter a constant function of the ovaries—it will be interesting for your readers to know, that this and similar facts now brought to light were clearly demonstrated thirty years ago by Dr. Ritchie, formerly of Glasgow, now resident in London.

In his papers published in the *London Medical Gazette* during 1843-45, he draws certain conclusions from over 100 dissections of the ovaries of females of all ages, and who had met their death while menstruation and pregnancy were in different stages.

Though written at a time when the profession was much agitated and interested about the subject, they seem to have been neglected by medical men in general; yet they have stood the test of time, and as our knowledge increases their accuracy becomes more apparent. The following are the points he brings fully out:—

1st. The Fallopian tubes are perfect in structure, and patent from birth, continuing so throughout life, being occupied in infancy and childhood by a tenacious glue-coloured mucus, which in the child-bearing period becomes a cream-coloured

fluid similar to vaginal mucus. They are both oviducts and vasa ejaculatoria, their distal extremities are true receptacula ovarum.

2nd. The ovaries contain from earliest infancy numerous Graafian vesicles, in continual progression towards the circumference of the glands, which they penetrate previous to menstruation by circular-shaped capillary-sized pores; their development and rupture being entirely independent of menstruation. As early as the sixth year they are highly vascular; at the fourteenth they are found varying in size from a coriander seed to a small raisin. Their ova can be detected in the usual transparent granular fluid, and their coats are so elastic that their contents on their rupture may be projected to at least twelve inches, the contained ova being conducted along the Fallopian tubes to the uterus.

After menstruation has been established no change takes place in the manner of discharge of the ovisacs, only the vesicles are increased in bulk, vascularity, and organization, which causes remarkable subsequent changes. When the menses have ceased vesicles are still developed and burst up to extreme old age, in a manner similar to what is observed in infancy and childhood.

3rd. In early infancy, extreme old age, and long continued organic disease, the ova are minute, transparent, and structureless cells; and in advanced childhood, soon after the critical age, and during pregnancy and lactation, they are more or less organized, larger, and in the latter state are often so well matured, that about one-third of the renewed pregnancies of married women take place while they nurse.

4th. The coats and cavities of ruptured ovisacs assume the four following forms:—

(1.) Mechanical dyeing of the coats an inky black (*corpora nigra*); or yellow (called by Dr. Ritchie, *corpora lutea*, but which are entirely different from the bodies known as such to physiologists), formed by decomposed blood. The above conditions were found indifferently at all ages and states subsequently to puberty.

(2.) In addition to the presence of blood in their cavities, organic changes took place in the coats, consisting progressively of an increased vascularity, a thickening, a whitening of the colour, and finally a corrugation of their tissues, forming white bodies either soft or hard (*corpora albidi*). In every variety of uterine condition subsequent to the establishment of menstruation these were found, but never before it.

(3.) A secretion of an organized, yellow-coloured, brain-like granular matter, and differed—

(a.) As the cerebriiform matter was connected with ruptured ovisacs of No. 1 form, having transparent pellicular coats, or with those of No. 2 form, having either their outer or inner coat thickened ;

(b.) According as the granular matter was deposited external to the inner layer only, or to the two internal layers of the ovisac. These appearances were found in immediate connexion with the existence of menstruation, and during the first seven months of pregnancy.

(4.) A conversion of the forms Nos. 1 and 2, arising out of a higher and more perfect organization ; found in unimpregnated and lactating females, in the period between the eighth and thirteenth months after conception. They consisted of red-coloured fibrous bodies with an external vascular portion enclosing an opaque film (*corpora rubra*).

5th. No specific distinction was found in the ovaries of women who had borne children and those of females who had not been gravid.

6th. The miliary-sized vesicles obtaining in the different forms of suppressed menstruation instead of bursting and being discharged when they reached the external surface of the ovary, which was the rule, were seen sometimes to traverse a portion of the broad ligament, and occasionally to become solidified in this situation. A similar extrusion of *corpora albida* from the ovary to the broad ligament was also met with, and in both classes of cases a slender pedicular connexion of the bodies with the ovaries was in a few instances observable. In most cases of the examples of extruded vesicles here referred to, the Fallopian tubes were impervious, and in such cases the secretion of the ovaries of numerous

transparent minute vesicles with fragile non-elastic coats, and the discharge of those, as appeared, into the abdomen, seemed to continue irrespective of the tubal obstruction.

7th. Menstruation depends on a periodical augmentation of power in the nerves and blood-vessels that supply the uterus, giving rise to the formation within the viscus of decidual vessels, which exude lymph and red globules, the latter being evacuated mixed with watery fluid, mucous matter, and some of the salts of the blood. Sanguineous discharges may come from the uterus, but are not necessarily of the normal menstrual kind, and are usually occasioned by whatever temporarily or more permanently impedes the venous circulation of the uterus.

8th. Though the catamenia are never regularly secreted without the Graafian vesicles attaining a high state of organization, yet it is not necessary that a Graafian vesicle burst at each menstrual period. The elimination of ova and the process of menstruation are correlative effects of the ovaries, and to suppose the rupture of the Graafian vesicles to be the cause of the menses is to mistake a frequent association and, to some extent, effect for a uniform cause.

9th. The principal use of menstruation is, in regard to the ovary, to provide an accessory by which maturation of its vesicles, the absorption of their peritoneal and tenacious coats, and their extension generally, may be promoted throughout the child-bearing period of life, and in reference to the uterus, to furnish a nidus within its walls, by which the ovum may be entangled, retained, and nourished.

10th. Menstruation may return for several periods without the rupture of a vesicle, but when a vesicle is ruptured, during its prevalence changes take place in the interior and coats of the ovisac, forming bodies called by Dr. Ritchie corpora menstrualia. Some of such bodies are primary, being formed exclusively under the influence of the congestive menstrual nisis ; others are secondary, being transformations of primitive species, and are formed by reflex action on the still patent vessels of recently ruptured vesicles. If pregnancy be established a reflex vascular influence is set up towards the ovaries, and the corpora menstrualia undergo fresh changes,

assuming the forms described in Nos. 3 and 4 of the preceding 4th conclusion.

Any who wish to investigate this interesting subject would do well to study carefully Dr. Ritchie's papers, which are embodied in a book published by his son.* The reader will find that the desire of the author has been to put facts before the profession, and not to draw conclusions to support any preconceived theory.

Yours, &c.,

A. DUNBAR WALKER, M.D.

56, Ladbroke Grove Road.

DR. HALL DAVIS'S SPECULUM.

To the Editor of the Obstetric Journal.

SIR,—In your number of September, Dr. J. H. Davis speaks of my criticism of his cone-shaped speculum. I only advanced facts—that the same principle was to be found in my *Obstetric Manual*, published in 1857, and a Plate of it at page 228, which any one can see on reference to that work. The principle of the cone-shape then is not new. I have nothing to do with the instrument-makers' museum of 1866, or registering, except simply to state the fact as it stands before the public. The two Plates (my speculum and Dr. Davis's in your June number) are so like each other that it would puzzle any one to find anything new to register. My speculum had been in use some time. It was published in 1857, and in following editions, whereas Dr. Davis claims notice only from May, 1874. I think a priority of seventeen years entitled to some consideration, if the matter in question is worth anything.

I am, &c.,

CHAS. CLAY, M.D.

Andenshaw Lodge, Andenshaw, near Manchester,
August 31st, 1874.

P.S.—I think, on trial, my speculum will be found easier

* "*Ovarian Physiology and Pathology.*" Messrs. Churchill and Sons, New Burlington Street.

to introduce than Dr. Davis's, and less liable to Dr. H. Smith's objection. Dr. Routh's objection of tarnishing is also avoided by the looking-glass principle inside, and caoutchouc outside.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

OCTOBER, 1874.

SUCCESS IN MEDICAL PRACTICE.

MANY young men are now about to enter upon the study of medicine, full of hopes and fears, and above all things anxious to find out and use the proper means for insuring a prosperous career. It should be known to them that the factors which contribute to the formation of a successful medical man are very numerous. These may be divided into scientific and social. It is quite possible for a man to acquire considerable eminence either from his scientific attainments or from his social qualities, but the highest position is only to be reached by the possession of all the qualifications comprehended under both heads. At the onset, however, it must be admitted that not every one can gain this exalted status. It behoves, therefore, each student carefully to examine himself from time to time, and endeavour to discover wherein lies his weakness and his strength, for in this way alone can he find out in what branch of medical practice he is most likely to succeed, and to what position in his profession he may aspire. It may be broadly stated that all who are able to pass the preliminary examination can by careful study possess themselves of the elementary knowledge demanded before they can become legally qualified practitioners. Those whose natural abilities and means enable them to go further than this, and who determine to run a higher and harder race, must, when they have decided what their goal shall be, keep it persistently in sight, and move on towards it with unswerving purpose. The first step towards

success is to obtain in as simple and effective a way as possible, a thoroughly systematic knowledge of all subjects connected with medicine ; and by this is meant not simply a memorial mastery, but a complete mental digestion and assimilation of medical science—not blindly following writers without verifying their references, nor accepting the dicta of authorities without repeating their experiments. This in itself is a Herculean labour, for, although begun during student life, it has to be carried on continuously. Nevertheless, thus alone can the pinnacle of medical eminence be mounted. The social qualifications which conduce to success in medical practice are very many. Health is most important, for without it no one can year after year bear continuous bodily fatigue and mental strain. Endurance also is absolutely necessary. It enables its owner to bear with the whims of patients and annoyances of practice, and supports him in the still more difficult task of waiting till patients and practice arrive. A sympathizing and gentle manner always wins staunch friends. Accomplishments tend to popularity. A good writer, speaker, or linguist has immense advantages, as also has a man of refinement, well-dressed, with a fine person and good looks. Nerve and tact are indispensable, and a strict observance of social and medical ethics is essentially necessary. These qualifications act beneficially, and with equal force, whatever branch of the profession may be chosen. Special practice, however, demands special aptitude. Almost all men have a natural predilection for one particular department of their profession. This often displays itself early, and continues steadily through life, even in spite of the distractions of general practice. It is good to encourage this liking, for even should it not end in its possessor becoming a special practitioner, it afterwards assists materially in keeping up an interest in his profession, in lightening his labours, and extending his knowledge. The disposition to practise specially can only be indulged in large towns, and those who adopt it often succeed wonderfully and enjoy a highly honourable position. The division which embraces the largest amount of work is without doubt, Obstetric medicine. Midwifery and the diseases of women and children form two-

thirds of the occupation of general practitioners. It is, therefore, fortunate when a student takes interest in this great branch, for more than any other it is likely to open up to him a prosperous path. Let him not be misled by the inadequate means at present existing for teaching it into the belief that it is of little importance. If he has a strong liking for it, or for any other department, let him, if possible, follow fearlessly his inclination, resting most certainly assured, whatever line he may adopt, that honest work and righteous life will win respect and lead unerringly to success in practice.

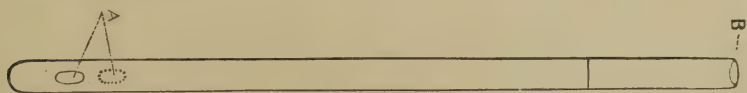
New Invention.

FEMALE CATHETER AND THERMOMETER CASE COMBINED.

By JAMES R. CHADWICK, M.D., Boston, U.S.A.

Lecturer on Diseases of Women at the Harvard Medical School, &c.

To such gynecologists as are in the habit of carrying a clinical thermometer I wish to suggest the expedient of adapting the thin metal case for use as a female catheter. This idea I have been able to carry out by having two eye-lets (A) punched near the extremity, and an opening (B) made in the rounded end of the cap, just small enough to prevent the thermometer escaping. It is, of course, essential that the cap should either screw on to the case, or at least fit tightly, inasmuch as without the cap the instrument hardly has sufficient length.



Having recently availed myself of this improvised catheter in several emergencies, and found it perfectly efficient, I venture to think that it may prove to others, as it has to me, not a substitute for the common catheter on ordinary occasions, but a *pis aller* when the other is not at hand.

Notices and Reviews of Books.

The Complete Handbook of Obstetric Surgery ; or, Short Rules of Practice in every emergency, from the simplest to the most formidable Operations connected with the Science of Obstetrics. By CHARLES CLAY, M.D. Third Edition. London : J. & A. Churchill, 1874. Pp. 340 ; 8vo.

THIS is indeed a most taking and comprehensive title, and it is not surprising that a book offering so much at such a small price should have arrived at its third edition. The busy general practitioner and student are always in want of this kind of work. Their time is so much occupied with other matters that they are only able to learn the main facts of a subject, and any one who will condense and generalize for them is a welcome benefactor, to whom they are always most grateful. Dr. Clay's little book contains a large amount of useful information, and the present edition is an improvement upon the last. The author has, however, a great deal to do to it before it can be looked upon as a "Complete Handbook." Much more must be added, and the process of "rejecting what is useless and ought to be forgotten" requires to be carried still further. For instance, the author describes the old method of removing uterine polypi by strangulation with the double cannula (which he figures) and ligature. This operation is now condemned by all the best authorities, and very properly considered unjustifiable, many deaths from pyemia having followed its employment. Dr. Clay says, "excision is preferred by many," but evidently does not class himself among this number, as he takes up several lines of his valuable space in relating a case in which the ligature succeeded well. Other faults might be pointed out which we hope will not be found in the next edition. It must be acknowledged that a handbook such as this is a most difficult thing to write, and, once written, it is equally troublesome to alter in such a way as to make it contain the pith of all the latest investigations and improvements, and

at the same time not to interfere with the unity of its text. Owing to its wide circulation, however, it has immense influence over many minds, and no labour should therefore be spared in endeavouring to render it accurate and reliable.

Harvey and His Times. The Harveian Oration for 1874.
By CHARLES WEST, M.D. London: Longman, Green
and Co., 1874. 8vo. Pp. 64.

WHEN it was announced that the Harveian Oration for 1874 was about to be delivered by so eminent an obstetrician as Dr. West we at once concluded that our own great Harvey would at last be presented to the profession in his true character. But we have been grievously disappointed. Dr. West has succeeded in collecting a large amount of interesting matter relating to the hero of his oration, but he has not shown us Harvey, who, if it had not been for his great discovery, would now have been known more particularly as the father of British obstetrics—the first Englishman who published in his own language a work on parturition, and whose preserved medical observations refer to the diseases of women, and prove him to have possessed knowledge and employed methods of treatment far in advance of his contemporaries. Can it be true that midwifery is yet under such a cloud as to render this prominent and obvious view of Harvey's character distasteful to the profession? However this may be, it is at least certain that the true Harveian Oration has never yet been written, and whether he be debased or ennobled by his close connexion with obstetric medicine, the real Harvey will never be seen until this salient characteristic of his professional life is duly acknowledged and portrayed. We should have been pleased to have complimented Dr. West upon the accomplishment of a task which would have rendered what has been so long due to Harvey, and to the branch of medicine of which the orator is so distinguished an ornament.

Abstracts of Societies' Proceedings.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(Abstracts of Papers read in the Obstetric Medicine Section.)

Application of the Galvanic Cautery to Gynecology.

By J. BRAXTON HICKS, M.D., F.R.S.

AFTER describing the mode of action of the various forms into which the platinum wire is arranged, he explained their adaptation to the various diseases met with in obstetric practice ; comparing it, as he proceeded, with the other forms of cautery, with the knife and *écraseur*. He pointed out the special advantage of the wire loop in cases of malignant disease of the cervix, which were too sessile for the *écraseur*. He also alluded to the great advantage it was, in this form of cautery, that the loop, needle, and conical forms could be applied cold ; and that complete and careful adaptation to the end intended could be effected. The paper was illustrated by Messrs. Krohne and Sesemann with apparatus (slightly modified, after Dr. Middeldorff's) in action. The battery was Benson's combination four cells ; the carbon plates immersed twelve inches by eight.

On Dysmenorrhea.

By C. R. DRYSDALE, M.D.

The object of this paper was to state the conviction of the author that over much attention had of late years been paid to the mechanical treatment of painful menstruation, to the exclusion of hygienic and therapeutic remedies of less heroic but no less beneficial nature. This opinion was given after a trial made for some years of the various methods recommended by Sir J. Simpson and his able followers with very doubtful success. In some instances cases of dysmenorrhea, treated by dilatation by means of sea-tangle tents, had become more intractable from the superaddition of some other uterine disease, such as pelvic peritonitis, or even abscess, to the former severe sufferings of the patient. Again, in some cases of incision of the cervix uteri, it was questionable that damage of a severe nature had been done to the patient, and that, above all, when the internal mouth of the cervix was divided. Several instances of this kind had come before his notice where, indeed, no relief had been given, after all, to the painful and distressing malady, which was certainly one of the most distressing diseases that members of the human race were subject to. Dr. C. R. Drysdale thought that the surgical school had of late laid far too much stress on the supposed necessity of cutting operations in dysmenorrhea, and asked whether sufficient attention had been given to the use of warm baths, quinine, and iron, Indian

hemp, chloroform, and other remedies ; the use of a pessary, like those called Hodge's, was often of service ; and catheterization with the sound was sometimes of use ; nor did he entirely object to incisions being made use of in those very rare cases where there is conical cervix with pin's-head os uteri. But, in the immense mass of cases of painful menstruation coming before the practitioner, there is no very great narrowing of the canal of the cervix. In all such cases he had come to the conclusion that it is unadvisable to have recourse to any surgical operation, but that palliative and hygienic remedies should alone be had recourse to.

On Maternal Impressions.

By J. CLAPPERTON, Esq.

Mr. Clapperton read a paper on the effects produced upon the fetus by some fright experienced by the mother in the early months of pregnancy. In a large proportion of the cases the object of fright was a natural object, and the results of the fright were various. In some, a nevus, or mother's mark, bearing a striking resemblance to the object which excited the mother's alarm, was found upon the skin of the fetus ; in others, a graver impression was made, and there was a serious modification or arrest of development induced. In order, however, for this to take place, a certain progress only must have been made by the embryo ; a little further development protected it from any very grave modification. In some instances the changes produced by fright were recurrent in the same individual, the object being different in the separate cases. Mr. Clapperton had met with one of these recurrent cases ; in the first instance the object was a rat, the second a dog. Other observers had had similar experiences. The actual means by which such modification was produced were not quite determined on, as there had not yet been demonstrated any nervous connexion between the mother and her child. Further research, Mr. Clapperton thought, might succeed in demonstrating some nerve communication to exist. After showing that there were some grounds for supposing that these impressions upon the mother affecting the embryo were not confined to human beings, Mr. Clapperton discussed the importance of these malformations from a diagnostic point of view, and stated from his own experience the puzzling character of the presentation in these cases. The paper was illustrated by a specimen.

The Rectum in its relation to Uterine Disease.

By ARTHUR W. EDIS, M.D.

The author was desirous of drawing attention to the important help afforded us by the rectum, both as to the diagnosis and treatment of uterine disorders. Although known to the few, exploration by the rectum seemed scarcely as generally known as its importance would suggest ; and, for the relief of pelvic symptoms, there were numerous cases where sedatives applied *per rectum* were of far greater service

than when taken in the ordinary way. As regards the diagnosis of uterine disorders, there were several methods of rectal exploration: viz., the ordinary digital one—useful in cases of retroflexion, fibroid, and ovarian tumours, &c.; eversion of the rectum through its sphincter, like the finger of a glove, by pressure from the vagina; manual exploration, as suggested by Dr. Gustav Simon. In reference to the treatment of uterine disorders by the aid of the rectum, the cases were very numerous. Reposition of the retroflexed gravid uterus could readily be accomplished by pressure *per rectum*. The relief of imagined uterine symptoms might often be effected by a proper attention to the condition of the bowels. The question of absorption by the rectum was too well recognised to need discussion. Pessaries and suppositories made of gelatine and glycerine were far more useful than those made with cocoa-butter, absorption being more uniform and certain. In menorrhagia, enemata of ice-cold water, acting by reflex action, proved of great service. In dysmenorrhea, enemata or suppositories of morphia, belladonna, and other agents, were very useful, and too little resorted to. In the morning-sickness of pregnancy, the most intractable vomiting might often be relieved by opiate enemata or suppositories, and life sustained for many weeks by nutrient enemata. In cancer of the uterus, suppositories were far more useful than pessaries in allaying pain. In chronic constipation, small suppositories of soap or extract of belladonna were of much service. As to diseases of the rectum itself being mistaken for uterine disorder, the mistake was not unfrequent; fissure causing vaginismus, ulcer causing dyspareunia, menorrhagia, &c.

On the Tensile Strength of the fresh Adult Fetus.

By J. MATTHEWS DUNCAN, M.D.

He began by pointing out the very wide room there was for advancing midwifery by laboratory experiments of varied character. Without many such, indeed, progress in many practical matters was impossible, because without them we could not reach a solution of many questions which were fundamentally important in the settlement of what was right practice. One of these questions was that whether delivery by podalic version or by forceps in cases of contracted pelvis was the better proceeding. After a hundred years of mere discussion the question was still unsettled, and, without laboratory experiments, would remain unsettled. The present paper gave a few simple results of an inquiry as to how much force it was possible to get applied to the fetal head by pulling on the child, and Dr. Matthews Duncan had made out the following points:—

The child's neck is the part that gives way first, and under a force of about 120 pounds. Before the whole neck gives way the spinal column snaps under a weight of about 105 pounds. One leg is enough, so far as mere strength of materials, to pull by, for pulling by one leg dissevers the child at the neck. The Prague seizure is not required, at least as an aid to the leg. As in the neck, so in the

leg, the bones give way before the soft parts. By the forceps a greater extractive force can be used than by podalic extraction, for the purely extractive force by the latter cannot be above about 120 pounds. Much greater force might be exerted by the accoucheur than 120 pounds, but no greater force than about that amount could be exerted in simply dragging the head through a contracted brim, the body being delivered, for if more were applied the neck gave way. As the spinal column yielded under about 105 pounds, the force applicable with a view to delivery of a living child was further restricted to within that amount. Many other important points were dwelt upon in the paper, with the object of introducing exactness, where hitherto there was great want of this desirable precision.

On Decollation as a Mode of Delivery in Shoulder Presentation.

By FREDK. W. WRIGHT, M.D., Derby.

After referring briefly to the opinions entertained by numerous writers on this subject, the author recorded his method of procedure, which consisted in passing a simple blunt hook, pierced with an eye carrying a piece of twine or tape, to which are attached half a dozen thin wires made of copper, over the fetal neck. The presenting fetal arm is, meanwhile, seized by the right hand of the accoucheur, and considerable traction made upon it until the left fingers are passed over the neck, when the blunt hook is inserted, and traction made so as to enable the operator to withdraw the twine. A leash of copper wire now attached to this, and traction made at the end of the twine, thus drawing it out of the vagina, while the wire will be drawn in and over the child's neck. By pulling the opposite end of this wire-saw rapidly backwards and forwards, with a saw-like motion, the head of the fetus may be severed in five seconds. The body was then extracted by the presenting arm; or, if this had been amputated to give room to operate, the body might be readily extracted by means of the crotchet hooked over the clavicle or over one of the ribs. If the decollation were made close to the shoulder, there will be less difficulty in delivering the head, as the whole length of the neck, with its firm groundwork of vertebra, thus left attached to the head, makes an excellent hold for appropriate instruments. The head is then fixed in the pelvis by external pressure, the neck if possible being made to present; this is then seized by a pair of strong forceps with horned teeth on the inner aspect of both blades, like craniotomy forceps, and traction made upon it till the head escapes externally. Should the neck give way under the efforts at traction, the head may be delivered by (a) the forceps, (b) the crochet hooked into the lower jaw, or (c) the posterior fontanelle may be perforated and the crotchet introduced within the cranium, and traction made upon one of the cranial bones. The author thus briefly summed up the comparative advantages of the two operations—evisceration and decollation. Evisceration is not generally completed under an hour; decollation is accomplished in a few minutes. In the former, anesthesia

has to be kept up for an hour or more ; in the latter, it is either not required at all, or not required for more than a few minutes. In the former, the soft parts of the mother are liable to be lacerated by removal of the bony covering of the viscera ; in the latter the liability stands at zero. In evisceration, the operation is prolonged, bloody, repulsive, and abominable to the last degree ; in decollation, the operation is speedy, is not bloody, and is not repulsive in the least degree. In the former, the instruments required are numerous and complicated as well as dangerous ; in the latter, the instruments are never more than three—viz., the harmless blunt hook, the simple wire saw, and the toothed forceps for delivery of the head. In the former, there is no reduction of bulk, delivering a fetus doubled in itself, even though deprived of its viscera ; in the latter, the bulk is not increased. Perforation and evisceration are not always sufficient to bring relief to the mother ; decollation never fails to bring instant relief and safety to the mother, and is unquestionably simpler, safer, and speedier than evisceration.

The Long Forceps, the Short Forceps and the Vectis.

By EDGAR G. BARNES, M.B., Eye.

The author recorded his experience in twenty-six cases. In twelve, he employed the long, in fourteen, the short forceps. All the mothers recovered ; twenty-four of the children were born alive. He preferred the long to the short forceps, and thought the former, in the majority of instances, far superior to the vectis, which latter was only adopted to remedy malposition of the head, whereas the long forceps accomplished this, as well as remedied slight disproportions between the fetal head and pelvis, and augmented the deficient *vis a tergo* by supplying a *vis a fronte*. The object of his paper was to promote a discussion on the relative merits of the vectis and forceps.

Accidents that may happen to Pregnant Women suffering from Disease of the Heart.

By MICHEL PETER, M.D., Paris.

Women suffering from an organic disease of the heart, who become pregnant, are exposed to accidents that may strike the lungs, impede gestation, and aggravate the state of the heart. The pulmonary accidents are production of an extremely rapid double congestion of the lungs, with spitting of blood, and asphyxia, or capillary bronchitis, or lobular pneumonia, or double pleurisy. The accidents of gestation are miscarriage, with the death of the fetus. The cardiac accidents are the acceleration or aggravation of the general disorders attending organic diseases of the heart—namely, dyspnea, painful palpitation, visceral congestion, anasarca. Pulmonary accidents and miscarriage happen ordinarily towards the middle of the gestation, and especially in the course, or towards the end, of the fifth month. These results were derived from eight cases, four observed by the author, and eight by Professor Sée, at La Charité, in Paris ; M. Budin, house-physician

at the Hospital St. Antoine, in Paris ; and M. Seuvre, house-physician at La Maternité, of Paris ; each of those physicians having observed their cases after their attention had been called to these facts by the author. All these women but one were not at their first gestation ; they had their attacks, one at her second pregnancy, three at the third, one at the sixth, one at the fifteenth ; and one of them, after having miscarried at her third gestation, miscarried again at her fourth and fifth ; another, who miscarried at her sixth gestation, had again two successive miscarriages ; at length the one who miscarried at her fifteenth gestation had also two successive miscarriages. The meaning of these facts is, that their heart was a fatigued one, both by the increase of work caused by pregnancy, and the more remote date of the disease of the heart. The production of the pulmonary accidents is due to the augmentation in the total mass of the blood, which increases necessarily as increase the wants of the fetus. Thence the occurrence of these accidents, not at the beginning of the pregnancy, but after some months. The augmentation in the total mass of the blood, caused by pregnancy, produces physiologically plethora in the lungs, and, in some women, dyspnea, and even spitting of blood. The disease of the heart involves morbid congestion of the lungs, hence a pregnant woman with disease of the heart is doubly exposed to pulmonary accidents. The gestation produces an hypertrophy of the left ventricle, so that morbid regurgitation of blood in the lungs is increased by the state of heart. In seven cases the organic disease of the heart was an insufficiency of the mitral valve (complicated, in two cases, by a stricture of the orifice). In one case only the disease was a stricture of the aortic orifice. Two of the women died in consequence of their pulmonary accidents and miscarriages, and the six who recovered were afterwards rendered miserable by the severe and permanent aggravation in the disorders of the disease of their heart. The recovery was due to medication both energetic and rapid. The practical consequences of these facts are the following :—1. A woman diseased at the heart should not be a mother. 2. If she become pregnant, the physician must attentively survey her respiratory functions, and intervene energetically as soon as pulmonary disorders begin. 3. If the woman be safely delivered, she must not nurse her child, in order not to fatigue more her diseased heart. 4. Reciprocally, when a pregnant woman suffers towards the middle of her pregnancy very severe pulmonary disorders, or when she miscarries by them, the physician must consult her heart, and perhaps he will thus discover a disease of the heart till then unknown or mistaken.

Sir JOHN R. CORMACK remarked that renal congestion is a common cause of albuminuria, and of the various associated dangers of toxemia. This toxemia takes place from the pressure of the gravid uterus, when there is neither disease of heart or kidney, particularly in *primiparæ*, in plural pregnancies, and in women of extreme muscular development, whose rigid fibres do not readily yield to the augmenting womb. Of course, with disease of the mitral valve, or

structural disease of the kidney, the toxemic dangers incident to the pressure of the gravid uterus are much augmented. He thought that Dr. Peter's paper was of great practical importance, as was the whole subject of the dangers of pregnancy originating in the diseases or structural peculiarities of the individual.

The PRESIDENT thought the albuminuria of pregnancy was often of a reflex nature.

Dr. PETER, in his reply, said that, in the cases he had observed, there were no symptoms of toxemia.

PATHOLOGICAL SOCIETY OF DUBLIN.

Meeting, April 11th, 1874.

Inversion of the Uterus—Amputation.

Dr. SINCLAIR exhibited a uterus which he had removed twelve months previously in Sir P. Dun's Hospital.

A woman appeared at the dispensary very much bent, looking old, weak, haggard, thin, and anemic, having all the appearance of a person suffering from advanced malignant disease of some internal organ. It was found upon inquiry that she was thirty-six years old, and had had five children, and that her last delivery occurred eight years previously. This delivery was stated to have been very protracted, and ever since she had suffered from repeated hemorrhagic discharges, and in the intervals of these from leucorrhea. She complained of constant bearing down, and great and constant pain at the back of the pelvis; in fact, she was in a condition of complete misery. On examination, Dr. Sinclair found the vagina occupied by a tumour, and on endeavouring to trace it to its attachment, the finger came in contact with the wall of the vagina reflected, as it were, over towards, and continuous with the upper end of the mass, forming superiorly a *cul de sac* all round. No uterus could be felt upon making a suprapubic examination, but to make assurance doubly sure, a bent uterine sound was introduced into the bladder, and the index finger of the left hand up the rectum, when on turning the concavity of the sound towards the sacrum, and raising the handle towards the pubes, the finger could be brought almost in contact with the sound, the tissues of the bladder, rectum, and perhaps a knuckle or two of the small intestines alone intervening; thus showing that the uterus was not *in situ*.

Upon further inquiry it was elicited that the woman had been delivered by a midwife, and that the placenta had not come away for more than two hours after delivery. No attempt had been made to remove it, but having necessity to evacuate her bladder she rose for that purpose and the placenta dropped into the utensil. She returned to bed very weak, and remained in that condition for a considerable time.

Dr. Sinclair came to the conclusion that this was a case of inverted uterus of long standing, or, as it is improperly called, chronic inversion of the uterus. The other results of the examination were—profuse bleeding, considerable prostration, and much pain. It was necessary to administer cordials and opium. Perfect rest was enjoined for some days, during which period astringent lotions and styptics were used. Another examination was subsequently made, during which Dr. Sinclair attempted the taxis, but the manipulation was so painful, and the hemorrhage caused by it so profuse, that he soon abandoned the attempt and determined to remove the uterus.

No more unfavourable case could, in Dr. Sinclair's opinion, have been presented for the operation, but the certainly soon fatal termination having been explained to her, and the bare chance of recovery by the removal of the tumour having also been laid before her, she cheerfully consented. Accordingly, by means of a Gooch's double cannula, a strong whipcord, well waxed, and thick enough just to fill the cylinders of the cannula, the tumour was easily snared. The ligature was then tightened by the greatest amount of force that could be brought to pull on it, so that the uterus was completely strangled at once and for ever. She bore the operation very well, did not complain of much pain, not nearly so much as when the taxis was attempted, and her pulse, when placed in bed, was 90. There was a considerable gush of bleeding when the ligature was being "brought home" and secured, but it soon ceased. The stomach was unaffected. She was placed on full doses of opium, and a light poultice was constantly retained over the abdomen. The bladder was carefully attended to, and perfect rest enjoined. Milk diet. The ligature was tightened at every visit, morning and evening, for four days, and the vagina syringed with tepid water. On the 5th day the mass was in a state of decomposition, and Dr. Sinclair then determined to remove it.

During these four days the patient complained of considerable tenderness about the hypogastrium, and much tension from tympany. Warm poultices and stuping was the only local treatment employed, but small doses of calomel and opium were administered at short intervals, so as rapidly just to touch the gums. These symptoms subsided and were nearly absent when she was placed upon the table on the 5th day after the ligature was applied. Dr. Sinclair first tried the *écraseur*. A piano wire was passed round the tumour, but it slipped over the surface of the tough but soft mass, and took off only a sliver from the anterior surface of the tumour. Another piano wire was then applied, but it snapped. Dr. Sinclair then did what he was sorry he did not do at first. By means of a *vulsellum* the tumour was drawn down; the fingers of the left hand were passed along the cannula posteriorly till they reached the furrow caused by the tightened ligature, and a little below this, by means of a uterine scissors, the mass was removed, with the exception of a very small portion below the ligature. The cannula was now removed, but the

whipcord was not interfered with. In three days the ligature and remaining small portions of the slough came away. From that moment the woman made rapid progress; in ten or twelve days after the uterus was removed she was sitting up; and in less than two months she was completely altered in appearance. She was in good condition; comparatively fat; had a good colour; looked much younger; was cheerful and happy. She left the hospital in perfect health.

Dr. Sinclair exhibited the tumour and pointed out that the inverted peritoneal cavity, on the former external surface of the uterus, was very nearly obliterated. On one side there was no trace whatever of what are improperly called the appendages of the organ; but on the other there was something which might be the remains of an ovary and a Fallopian tube. His colleague, Dr. Thomas Little, who had carefully examined the specimen, found no ovarian structure on the left side, but on the other he found a trace of what he considered to be an ovary. Strong adhesions of the peritoneal surface were observable. The Society had heard of cases of reposition of what is called a chronic inversion of the uterus of long standing; and he had read of a case recorded, if he remembered aright, by the late Dr. Tyler Smith, in which a uterus was returned to its normal position eleven years after it had been inverted. That was a very fortunate case; but in the case he had just detailed, after eight years the peritoneal cavity was nearly obliterated; and, in his opinion, when the uterus was a long time in an inverted condition, the use of the taxis was dangerous. In these very old cases the chances were 100 to one that adhesions existed; and if the operator succeeded in returning the uterus the woman would probably die of peritonitis. Had he continued for any lengthened period, or used much force, when he attempted the taxis in the case just detailed, Dr. Sinclair had little doubt that result would have been fatal. Dr. Sinclair also presented a drawing which was a faithful representation of the uterus, half size. The peritoneal surface is exposed by an incision showing the adhesions and almost obliteration of the false cavity.

Meeting, April 25th, 1874.

Fibroid Tumours of Uterus; Rupture of Tubo-ovarian Cyst; Peritonitis.

By Dr. M^cSWINEY.

The specimen which I have the honour to exhibit comprises the uterus, ovaries, and Fallopian tubes in a state of disease, of a woman aged between forty and fifty, who died this week in Jervis-street Hospital. She was brought to the hospital in a sinking state on Monday last. Her condition was then as follows:—She was nearly pulseless, quite cold, respiring between forty and fifty times gaspingly in a minute, and lying prostrate on her back, with the legs extended. On examining her I found the following state of affairs:—The abdo-

men was extremely tumid and prominent, and highly tympanitic upon percussion. It was exceedingly sensitive to the touch—the slightest pressure of the hand revealed the fact that it was exquisitely painful. She was scarcely able to speak, but I collected from her the following history of her case :—She said she was a married woman, and had had several children, the last one about six years before the present time. Her last pregnancy did not terminate favourably ; it was some form of miscarriage, and the child was not alive when born. After this she said she got disease of the womb, and went to Dr. John Hamilton, and was operated on by him once a week for five or six weeks. She then got well, she said, and remained in good health until the present time, with the exception that at each menstrual period there was an unusual flow of the catamenial discharge. She said “she had her changes very heavy” at every menstrual period, Five weeks ago she was attacked with profuse uterine hemorrhage, continuing unceasingly for the five weeks, so that it very nearly exhausted her life, and she was reduced to the last degree of weakness and prostration from it. Three or four days before I saw her the uterine hemorrhage had ceased, and she was suddenly attacked with the most acute pain in the abdomen. This pain was intensely acute and constant, giving her no ease night or day, and continued to the time she was taken into the hospital in a dying state. Two things were very evident from an examination of the woman at that time—one was that she was dying, and the other that she was suffering from extensive peritonitis. The condition of the parts examined after death was as follows :—Evidence of the most extensive general inflammation of the peritoneum was abundantly present in the abdominal cavity. All the organs and parts were glued together by recently-effused lymph. There was also a considerable quantity of a purulent-looking thin fluid in the peritoneal cavity. There was, moreover, evidence of remote inflammation of the peritoneum, more particularly of the peritoneum at the lower part of the abdominal cavity. A thick false membrane was found here. The front of the uterus was bound down to the bladder. The bladder was so thoroughly concealed that at first it was not easy to determine that there was such an organ at all. At the time of the autopsy it was covered with this dense thick peritoneal layer, requiring dissection to reveal its existence. The uterus and Fallopian tubes and ovaries were found in a state of disease. The uterus was enlarged, and its shape was altered ; it now presented somewhat of a square-shaped appearance. Projecting from the front anterior aspect of the uterus was a globular bulge out of the texture of the organ itself—being, in fact, a segment of a globe, which, if continued backwards, would be about the size of a billiard ball. The other portion of the uterus felt hard and unyielding to the touch. The Fallopian tubes at the left side afford a good example of the condition called dropsy of the Fallopian tube, which is not frequently met with, in which the fimbriated extremity of the tube is adherent to the ovaries, and is dilated into a cyst containing fluid. The calibre

of the tube as it is continued into this large cystic fimbriated extremity is considerably enlarged. At the right side the same condition of parts is seen, but in a very much lesser degree; nevertheless, the Fallopian tube on the right side is decidedly four, five, or six times larger than we generally see it, and it also presents a cystic enlargement at its termination in the ovary. I may state now that it was by rupture of the cyst in the right ovary, where it is indissolubly united to the fimbriated extremity of the Fallopian tube, that the peritonitis was set up which was the cause of death in this case. I found it so ruptured when making the autopsy. I have laid open the uterus, and find internally a soft sub-mucous fibroid tumour, which Dr. Bennett informs me is the fibroid tumour of Rokitansky, and which is attached by its base to the upper end or fundus of the uterus. At its extremity you see a clot—the last remains of that terrific hemorrhage which flooded the woman's life very nearly away for five weeks preceding her death. Dr. M'Swiney then cut into the tumour and showed it to the members. He observed in conclusion:—This specimen is interesting as affording an example of death by peritonitis, due to the bursting of an ovarian cyst, or tubo-ovarian cyst, occurring in a case of fibroid tumour or tumours of the uterus. Dr. M'Clintock has stated as the result of his experience that the most common form of death in these cases is by peritonitis.

OBSTETRICAL SOCIETY OF NEW YORK.

Meeting, March 3rd, 1874.

DR. THOS. ADDIS EMMET, *Vice-President, in the Chair.*

Case of Uterine Fibroid removed according to a New Principle of Operation.

Dr. EMMET reported a case of fibroid tumour of the uterus removed by him the day before. The patient had been suffering from excessive metrorrhagia during the past month, which had been controlled only by the constant use of styptic injections. The uterus was anteverted, and its cavity occupied by a fibrous tumour of the size of a fist; the sound could be introduced to the depth of five inches posteriorly and of three inches anteriorly. Suppositories of gelatine, containing each 16 grains of Squibb's aqueous extract of ergot (equivalent to about 100 grains of powdered ergot) were introduced into the rectum, where they produced but little effect, and then daily, during the last ten days, into the cavity of the uterus itself with marked beneficial result. The uterus, which at first had been more elongated and pear-shaped, now became broad at its fundus, where it measured no less than four inches; the tumour thus approached the internal os, although its broad attachment to the uterine wall was in no way changed. The great difficulty was to get

an instrument or a loop behind or around the tumour, in order to effect its removal. Dr. Emmet retroverted the uterus, seized the fibroid with a double tenaculum, and proceeded to draw it down towards the vulva, in which attempt he succeeded after about half an hour's steady traction, removing portions of the tumour with the scissors as it became attainable. When the fibroid had been brought down to the vulva, Dr. Emmet thought he was inverting the uterus, at which prospect he was not alarmed, for he knew that he could easily return it at once; he found, however, that the uterus had contracted behind the tumour as it was drawn down, and had thus by its individual efforts enucleated the base of the tumour, and at the same time prevented hemorrhage, and made it necessary only to divide the capsule of the fibroid with the scissors in order to remove the whole growth. During the whole operation, which lasted about an hour and a half, hardly a drachm of blood was lost, and that came from the laceration of the fibroid by the double tenaculum. The base of the tumour measured about two inches in diameter; after its removal only a slight depression could be felt at the fundus to indicate the spot where it had been attached. After the operation he followed his usual rule of washing out the uterus with warm water, and painting the whole of its cavity with Churchill's tincture of iodine, as a precaution against septicemia.

This is the most difficult case of the kind he has seen. A few years ago he removed a similar tumour in the same manner, but did not fully understand the rationale of the operation until yesterday. The steady traction used arrests hemorrhage, because it excites the uterus to contract behind the tumour as it is drawn down, and thus to compress the bleeding vessels, besides bringing the fibroid nearer and more convenient for removal. It is not the forcible traction of the fibroid towards the os, that is in the direction of the least resistance, but the *vis a tergo*, the contraction of the uterus behind the tumour, which gradually lifts the latter from its bed and enucleates it. This steady traction may be of service, if repeated at regular intervals, in bringing uterine fibroids within reach and making them amenable to operation, and may perhaps even accomplish their gradual enucleation.

Hypodermic Injection of Ergotine.

Dr. BARKER inquired as to the experience of the Society with hypodermic injections of ergotine in fibroid tumours. He had employed them in seven cases, always with the production of large abscesses at the point of puncture, and with no satisfactory results. He has seen more beneficial effects from the injection of fluid extract of ergot into the rectum.

Case of Purpura Rheumatica.

Dr. MUNDE related a case which would properly come under the head of cutaneous diseases, but inasmuch as it occurs almost exclu-

sively in persons under the adult age, may be considered to come within the limits of this Society.

A boy, eleven years of age, of slender, strumous habit, although his parents reported him as having always enjoyed good health, presented himself for treatment in the service of Dr. Munde, at the Free Dispensary for Sick Children, on February 13th last. He said that while rapidly ascending the stairs the day before, he had suddenly felt a severe pain in his left leg below the knee, which almost prevented him from completing the ascent of the stairs. The left calf was found to be much swollen and very painful; a liniment was applied without relief. The next morning the leg below the knee was covered with red spots. On seeing him the same afternoon, Dr. Munde found the left calf swollen, painful, tense, and both legs below the knee covered with *petechiæ* of various sizes; the joints were not affected. Although the diagnosis of purpura was made, the nature of the swelling of the left calf remained obscure. A saline laxative and a poultice to the inflamed leg were ordered. On February 16th the boy again presented himself: the swelling and inability to walk had entirely disappeared, but the *petechiæ* still remained; cod-liver oil and the syrup of the iodide of iron were ordered. During the night of the 19th the boy was seized with violent pain in the bowels, which was pronounced by a neighbouring physician to be due to peritonitis. On seeing the patient the next day, Dr. Munde found the pulse to be sixty-eight, the skin cool, the abdomen sunk, and painful only on pressure in the right iliac fossa; there was some diarrhea. The case was evidently only one of acute gastro-intestinal catarrh, which yielded at once to carminatives and opium, and a chloroform and soap-liniment stupe to the abdomen. Both legs below the knee, and the posterior surface of both thighs, the nates, and both forearms were covered with large, florid *petechiæ*, which were not changed by pressure or friction. There was no swelling of the joint, no sign of rheumatism; quinine and camphor—one grain each *ter die*—were ordered. As the exact nature of the case was not quite clear, Dr. Munde mentioned it to Dr. L. D. Bulkley, who, as a specialist, recognised the affection as purpura or peliosis rheumatica—a rather rare affection, which, to Dr. Bulkley's knowledge, had not been described in New York before. On seeing the patient two days later, this diagnosis was confirmed without fail, although the *petechiæ* had become much paler, and were beginning to disappear. February 27th the boy came to the dispensary again, and the *petechiæ* were found to have entirely disappeared; his appetite was good, and no farther treatment necessary, with the exception of tonics for his general health.

Peliosis rheumatica is a perennial affection, liable to return in the spring or autumn; it generally lasts from two to eight weeks, and appears to be of epidemic nature, similar to herpes and erythema papulatum, gyratum or urticans. It usually commences in the lower extremities, which are covered with spots of different shades of red,

and spreads over the rest of the body. The knee-joints generally become edematous and painful, and the affection may thus simulate rheumatism.

Remarks on Scarlatina.

Dr. REYNOLDS mentioned an epidemic of scarlatina which he had witnessed in a public institution last month. Throat complications and diphtheritic patches were very frequent; generally when they appeared—that is, about twenty-four hours after the appearance of the eruption—the latter would fade, the face assume a peculiar, absent expression, the eye become glassy, the pupil contracted, the pulse rise to 120, 130, or 160 beats in the minute, the temperature to 104° or 106° , delirium and general nervous prostration would ensue, the intensity of the poison appearing to crush the vitality of the system. Follicular pharyngitis, each follicle projecting as a distinct point, was common. He had just come from a case in private practice, in which the pulse this afternoon was 120, the temperature 102° ; now, at 9 P.M., the pulse is 130, the temperature 106° . The child will undoubtedly die before morning, being the third death from scarlatina in that family.

He thinks that more decision should be shown in isolating apparently convalescent cases or children who have not as yet been taken ill. Two children, who had been sick with angina and indistinct symptoms of scarlatina, had recovered, and were nursing their brothers and sisters sick with the same disease, were subsequently taken ill again with indubitable scarlatina. When scarlatina and measles occurred at the same time in public institutions, Dr. Reynolds has been frequently considerably puzzled in the beginning to determine which was measles and which scarlatina. He has seen some children run completely through scarlatina and measles both during his service of one month.

Meeting, March 17th, 1874.

DR. PEASLEE, *President, in the Chair.*

Two Cases of Tracheotomy.

Dr. POOLEY related two cases of tracheotomy performed by him. The first child, four years of age, had a croupy cough when Dr. Pooley was called; inhalations of steam were ordered. The next morning it felt better, but there were diphtheritic patches on the tonsils and epiglottis; the next day it was much worse, there was great dyspnea, and tracheotomy became necessary, which afforded immediate relief. When the trachea was opened a complete circular cast of the canal, about one inch in length, was expelled through the wound; this cast Dr. Pooley exhibited to the Society. The wound became covered with diphtheric exudation, the discharge from which eroded the skin of the neck on both sides almost to the

spinal column. With the exception of a light paresis of the lower extremities, the child is now doing well.

The second operation was performed the day before on a child fourteen months old, which was relieved by the tracheotomy, but died to-day. The exudation extended into the bronchi; temporary relief was obtained by throwing lime-water into the larynx by means of an atomatizer.

A Specimen of Dysmenorrheal Membrane.

Dr. THOMAS presented a specimen of a complete dysmenorrheal membrane, or cast of the uterus, a similar one being passed by the patient about every third month, and smaller shreds every month. If it were not for the membranes, Dr. Thomas would consider her a perfectly healthy woman. The lady is married, but has never been pregnant.

A Syringe for the Removal of the Mucous Plug in the Cervix.

Dr. THOMAS exhibited a syringe with a long nozzle and a piece of rubber tubing projecting half an inch attached to the nozzle, for the purpose of withdrawing the tenacious mucous plug, frequently obstructing the cervical canal, which often cannot be removed by an ordinary syringe. The end of the tubing is introduced as far as the internal os, and it is surprising into how small a cervical canal it can be passed.

Specimen of Fatty Degeneration, Atrophy, and Apoplexy of the Placenta.

Dr. PEASLEE exhibited a placenta derived from one of twins born at the seventh month. The other placenta is exactly similar; both are much atrophied and smaller than should be at that period, very thin, in places almost transparent, and contain one or two large clots of blood diffused through the tissue of the placenta, evidently placental apoplexy. The whole length of the umbilical vein is likewise occupied by a tolerably firm clot. The degeneration of the placenta is most probably of a fatty nature, and syphilis, even if not ascertainable, as in this case, the probable cause. The motions of the children ceased about a week before delivery, and both children were born dead.

Case of Interstitial Pregnancy.

Dr. JANVRIN related a case of probable interstitial fetation, which occurred in his practice. The lady had had two previous children; six years before she suffered from a uterine polypus, which came away spontaneously. Her menstruation was regular until March, 1873, when Dr. Janvrin first saw her; it then lasted ten days. May 3rd she had considerable pain and violent flooding. On examination the uterus was found to be retroflexed, as large as at the second month of pregnancy, and a fibroid or polypus was diagnosed. The uterus was replaced, the patient being in the knee-elbow position, and great

relief experienced therefrom ; the flooding diminished and the os internum became closed. June 9th she had a similar attack, and the diagnosis of fibroid seemed certain. Dr. Thomas saw her in consultation, and suggested that the case might be one of normal pregnancy. The uterus was again replaced ; slight flowing continued till July 1st, when the discharge of blood again became copious. Dr. Thomas suggested tubal pregnancy, for it certainly was not a normal fetation. Dr. Janvrin felt so certain that there was no fetus in the uterus that he passed the sound and found the uterine cavity to be $3\frac{1}{2}$ inches long, pointing slightly towards the right side. He also thought it might be tubal or, perhaps, interstitial pregnancy, for the enlargement behind, and to the left of the uterus was firmly connected with the latter, as if belonging to it. About the end of August Dr. Peaslee also saw the patient, and thought it a case of fibroid. At this time the patient thought she felt slight fetal movements. The tumour increased in size until November 1st, when the supposed fetal motions ceased ; no fetal heart-sounds could ever be detected. Dec. 19th, Dr. Janvrin was called, and found that uterine contractions like regular labour-pains were present. The sound was passed to the depth of five inches. The diagnosis of a large uterine fibroid was again made. In the beginning of last January, hypodermic injections of ergotine, containing two grains each, were made every other day. The tumour continued to decrease until, about the middle of February, it was only one-third its original size. Two weeks ago the lady had a violent attack of diarrhea, the first discharges of which were thrown away. In the evacuations of yesterday and to-day were found the bones, which Dr. Janvrin exhibited to the Society, and which evidently are derived from the hand of a probably five months' fetus. The finger introduced into the rectum, can just reach the border of the opening from which these bones were undoubtedly discharged. Dr. Janvrin thinks that the greater portion of the fetus is still remaining in the abdomen ; the tumour now has a rounded, somewhat irregular shape.*

Meeting, March 17th, 1874.

Sarcoma of the Uterus.†

By T. GALLIARD THOMAS, M.D.

SCATTERED through medical literature may be found descriptions of a tumour growing from the cavity of the uterus, which appears to occupy a middle ground between myofibroma on the one hand, and true cancer on the other.

* This case being still *in suspenso*, a full report of it is as yet impossible, but will be published in a subsequent number of the Journal.

† Just after the preparation of this paper, one upon the same topic appeared in the American reprint of the "London Obstetrical Journal," by Dr. W. F. Jenks. The literature of this subject is so scanty, that we necessarily drew upon the same

Presenting in many respects the ordinary physical aspects of benign fibroid growths in their early periods, these tumours demonstrate a marked tendency to return after ablation. Even after repeated and thorough removal, they again and again recur, and in many cases their real character is in this way discovered. Another peculiar and dangerous characteristic which marks their difference from benign fibroids, consists in their tendency to throw out fungoid growths, which show a marked tendency to undergo molecular death, and disappear by ulceration, which process saps the vital forces of the patient by repeated and prolonged hemorrhages, and by opening the mouths of absorbent vessels for the entrance of septic elements into the blood.

The clinical features of such growths will be found recorded in English literature by Callender,* Hutchinson,† Oldham,‡ and West,§ to whose interesting accounts the reader is referred.

Nomenclature.—Pathologists were struck by these two facts in connexion with such tumours: first, their marked tendency to return, and second, the absence of micrographic evidences of cancer in pathological developments, showing many of the features of malignancy. Paget grouped them under three heads—malignant fibrous tumours, recurrent fibroids, and myeloid tumours; while Lebert described them under the name of fibroplastic tumours, and Rokitsky under that of fasciculated cancer.

Not until the time of Virchow were they described under the old and previously loosely applied term of sarcoma. This pathologist clearly defined the disease and placed it in a distinct class apart from developments somewhat similar in clinical features, but some of which were entirely benign and others truly cancerous.

Definition.—"Sarcoma,"|| says Virchow, "is for me a production easily definable. I mean by it a growth, the tissue of which, following the general group, belongs to the connective-tissue series, and which is distinguishable from marked varieties of the groups of connective tissues only by the predominant development of cellular elements." They possess, he declares, the characters of incomplete rudimental or embryonic development, and not those of perfect tissue. This peculiarity existing in the original tumour, becomes more and more marked as recurrence takes place after successive removals.

Frequency.—Were I to draw my deductions from my own experience, I should say that sarcoma of the uterus was not very rare. Many cases which have been regarded as cancer, and not a few of supposed

sources, and the two papers are very similar. The excellent essay of Dr. Jenks really renders this superfluous, and it should not have appeared so soon after his but that I was under promise to read it before a Society, and could not spare time to replace it. Having read it, it passed out of my possession.—T. G. T.

* *Path. Transacts.*, vol. ix.

† *Ibid.*, vol. viii.

‡ Wilks, "*Path. Anat.*," p. 404. § "Dis. Women," art. "Recurrent Fibroid."

|| "*Pathol. des Tumeurs*," par R. Virchow, traduit par P. Aronsohn, vol. ii. p. 173.

fatal fibroid tumour or polypus, have been unquestionably instances of this affection. Virchow,* however, expresses a different opinion. "The production of sarcoma on the mucous lining of the uterus," says he, "is often spoken of, and even in his first work Lebert describes a fibroplastic polypus. Nevertheless, from my observation, sarcoma is very rare at this point, and the majority of tumours described as such are of a simple hyperplastic nature. True sarcoma, however, does originate in the uterine mucous membrane in medullary form, difficult of recognition, often very soft, and with round cells, sometimes with all the characteristics of myxosarcoma; however, the tissue may become in places more compact, and may form larger masses, and attain a degree of firmness so great that I have seen the best diagnosticians deceived as to the nature of the affection, and take it for a fibroid." Before my attention was especially called to this subject, within the past three years, I confounded such cases with medullary cancer. Since that time I have met with four cases, which, both from clinical and microscopical evidence, I am forced to regard as sarcomatous developments. None were confounded with simple hyperplastic growths, as Virchow suggests, for all ended fatally.

Pathology.—Pathologists have commonly confounded sarcoma of the uterus with cancer. The reasons for this are probably these: after the former begins to ulcerate it resembles the latter in many clinical features; both have a marked tendency to return, and they sometimes unite in the same tumour. The time has now certainly arrived when they should be separated both clinically and pathologically.

Of late years, uterine sarcoma as a disease apart from cancer has received careful clinical study in Germany, excellent reports of cases having been furnished by Ahlfeld, Hegar, Winckel, Gusserow, and others.

Unlike myofibromata, sarcomatous tumours have no distinct capsules, but are immediately connected with the uterine connective tissue. Virchow declares that "in accordance with their density, sarcomata may be, like all morbid tissues, divided into two groups—soft and hard sarcomata." As the disease consists merely in a multiplication of cells, homologous to the tissue in which it grows, and subject to no other disorder than hypertrophy, it is characterized by one of the cells typical of the connective-tissue group. Thus we may have spindle, round, and stellate-celled sarcoma, the second being the most frequent, and the first the rarest in the uterus. In some cases the cells are so large as to cause the name "giant-celled" to be given to the growth. "We may," says Virchow, "divide all sarcomata, and not simply those rich in cells, into two groups: the one with large, and the other with small cells." These cells are merely exaggerated reproductions of those of the mother tissue, and "behave

* Op. cit., vol. ii. p. 344.

like cells of parenchyma, not like surface cells (epithelium, cancer)." Between these cells the intercellular substance is always preserved, while in cancer we find cells of epithelial type pressed closely together in alveoli formed of *trabeculae* created by connective tissue.

Sarcoma, usually primary, is sometimes engrafted upon myofibroma by the process styled metaplasia, and a true sarcomatous tumour may itself be affected by cancer. Sarcomata into which a great deal of fibrous tissue enters are dense, like myofibroma, and Hegar* admits a transition form, a fibro- and myosarcoma.

These growths are so rich in vessels, both as to number and size, that Virchow declares that this fact allows of a distinction being easily made between them. To this vascularity is due their tendency to give forth a watery flow, to bleed freely, and to absorb septic materials.

Causes.—With reference to this subject little can with positiveness be said. Virchow alludes, in speaking of sarcoma in general, to injuries, youth and old age, primitive debility in the part affected, inflammation, &c. ; but whether uterine sarcoma has ever been traced to these, I do not know.

Symptoms.—These may be summed up as menorrhagia and metrorrhagia; offensive mucous discharge; pinkish watery discharge; discharge of shreds or portions of the tumour; pressure on rectum and bladder; expulsive uterine pains; constitutional depreciation.

Gusserow declares that pain is constant and early, but Hegar denies this. My experience would lead me to endorse the opinion of the latter.

Physical Signs.—These will depend to a certain degree upon the peculiarities and stage of the growth. Sarcoma invariably develops in the cavity of the uterus. The growth usually arises from the uterine wall by a broad base, and projects into the cavity. In time uterine contractions dilate the cervix, and a portion of the mass is forced into the vagina.

In rare cases sarcoma assumes a polypoid form, and in others, coincidently with the uterine development, an extra-uterine growth projects into Douglas's pouch or into one iliac fossa.

Another way in which sarcoma affects the uterus is by diffuse infiltration into one or both walls. This may affect mucous and sub-mucous tissues alone, or even the muscular structure itself. This surface soon ulcerates, and gives forth a fetid discharge. In some cases this diffuse infiltration may affect the whole uterus, giving it the appearance of symmetrical enlargement.

If the tumour can be touched it is usually found to be soft, spongy, and friable, though in some cases it is hard and firm like myofibroma. By conjoined manipulation the uterus is found to be large and usually

* *Archiv für Gynäk.*, ii., 1871.

irregular in shape, as if the seat of fibroid tumours. The uterine sound indicates enlargement of the organ. It is very common for the cervix to be dilated and portions of the mass to be expelled.

Differentiation.—Although these symptoms and physical signs will strongly point to the existence of sarcoma, the microscope alone will distinguish it from cancer, myofibroma, and simple hyperplastic growths.

Course, Duration, and Termination.—It runs a much slower course than true cancer; a much more serious one than fibroids and hyperplastic growths. In rare cases it terminates rapidly, but it has frequently been known to last five or six years. The patient gradually sinks under the following morbid influences: hemorrhage, septicemia, spread of the disease to neighbouring abdominal viscera, disturbance of nutrition, or peritonitis.

Prognosis.—This is invariably unfavourable; a fatal issue is a question merely of time, whether the growth be removed or left uninterfered with. The microscope to a certain extent aids us in predicting the probable rapidity of the affection. The more nearly it approaches a hard growth, the preponderating element of which is fibrous tissue, the slower will be its course; the more it partakes of a soft character and shows itself rich in cellular elements, the more rapid will be its progress in molecular death.

Again, the small-celled varieties show a more marked tendency to rapidity of production than those which are characterized by large cells.

Treatment.—If the cervix be dilated and a sarcomatous growth be discovered in the uterine cavity, it should be entirely removed by galvano-cautery, écrasement, excision, or the curette, and its base thoroughly cauterized with chemically pure nitric acid or some equally powerful caustic. If the cervix be not open, dilatation should be accomplished by the use of tents, and the growth attacked by the means mentioned.

The following cases of this interesting affection which have fallen under my observation will illustrate the remarks just made.

CASE I.—I was called to see Mrs. X., aged about forty-five years, the mother of several children. I found that she had been under the care of an irregular practitioner for eighteen months, during which time she had suffered from excessive metrorrhagia, fetid vaginal discharges, hydrorrhea, and severe gnawing pelvic pains. At times the vaginal discharges resembled the washings of beef, and contained sloughs of tissue, which were very offensive in odour. Up to about a month before I saw her, she had suffered from violent "bearing-down pains," but since that time these had ceased, and she had felt comparatively comfortable, though greatly exhausted.

About the same time her physician had made a vaginal examination by touch, and had declared that she had "cauliflower cancer." Upon examination I found the vagina filled with a pulpy, friable

mass, extending from the vulva to the cervix uteri. The passage of the fingers around this resulted in free hemorrhage and detachment of pieces of the growth. By conjoined manipulation the uterus could be felt above the pelvic brim, as large as if it were developed to the fourth month of pregnancy. Upon removal of a portion of the mass, it was carefully examined for me by Dr. Francis Delafield, and pronounced to be an undoubted instance of sarcoma of the uterus.

Although not with any hope of a permanently favourable issue, I, in accordance with the earnest solicitations of the family, removed all that portion of the mass outside the uterus by galvano-cautery. The way being now clear for an examination of the uterine cavity, this was found much enlarged, and filled with the same kind of material as that removed. By means of a large curette it was emptied by scraping.

To all appearances the portion contained in the vagina had formerly existed in utero, and been expelled by uterine contraction. A certain amount of sarcomatous material was, however, found adherent to the posterior lip of the cervix and upper portion of the vagina.

The patient lived for a fortnight after the operation, and then died from exhaustion.

CASE II.—I was requested by a physician of a neighbouring town to see with him Mrs. E., a German woman, wife of a florist, aged about forty years, who had been suffering for the past two years from severe pelvic pains, menorrhagia, with occasional metrorrhagia, and during the last six months from a very fetid hydrorrhea. She was pale and cachectic, feeble and much exhausted. The pulse was rapid and small, and dark circles existed under the eyes. Upon vaginal examination the os uteri was found dilated to the size of a Spanish dollar, and within it could be touched a fibrous mass of rather friable and spongy character. Conjoined manipulation revealed the fact that the uterus was much enlarged. I proposed to the doctor that it should be emptied by means of the curette, to which he assented, declaring at the same time, however, that he had twice resorted to this procedure, and that the growth had immediately returned.

Placing the patient on the left side, and introducing Sims's speculum, I drew the uterus down by means of a large tenaculum, and rapidly and completely emptied it of its contents. Some of the material thus removed was examined by Dr. Delafield, who declared that it was neither cancer nor a benign fibroid; at the same time he was unwilling to pronounce it positively to be sarcoma. From the clinical aspects of the case it appears to me that it was almost positively of this nature.

The subsequent history of the case was this: the uterus was again filled by recurrence of the growth, sloughing of which gradually took

place, and hemorrhage and septicemia put an end to the patient's life.

I have met with two other cases fully as striking as those just recorded, but their histories are so identical with them that I refrain from detailing them. In their place I record the following remarkable instance of this affection developing itself upon the vulva.

Mr. and Mrs. G., a German couple of the middle class, strong and healthy in appearance, brought into my service at the Strangers' Hospital, by the advice of the late Dr. Moulton, of New Rochelle, their infant daughter, aged eighteen months. The child was an extraordinarily healthy and beautiful one, and quite well developed for its age. It was born and reared at New Rochelle, and had been in perfect health until three or four months before, when a small tumour had made its appearance on the left labium majus. This had developed rapidly, and at the time I first saw it, was as large as the half of a large hen's egg, bisected lengthwise. Dr. Moulton had taken alarm at the rapid growth and peculiarly elastic feel and glistening appearance of this tumour, and kindly sent the child to me, expressing the hope that I would at once remove it. The base of the tumour extended along the labium majus, its highest point being attached to the rim of the meatus urinarius.

The parents of the child were given a very unfavourable prognosis as to the prospects of cure by operation, at the same time that I urged the propriety of surgical interference. They immediately accepted the proposal, and the operation was performed by me the next day, in the presence of Drs. J. L. Brown, Walker, Mann, and Kuentzler. Taking a long, curved needle, I passed it under the tumour from its lower extremity, near the perineum, to its upper at the meatus, and left it in this position, its extremities projecting. A shorter curved needle was then passed under the tumour at its middle, and at right angles to the first. The wire of the galvano-cautery was then passed around the tumour, being held in position by the four projecting extremities of the two needles. Being brought to a white heat, the loop was then very slowly tightened and the mass removed. The shape of the needles gave to the wound a concave form, and thus complete removal of the base of the tumour was secured. The child recovered perfectly, but in five months it was again brought to the hospital, the tumour having returned, and being nearly as large as at first. It was removed a second time exactly in the same way, but a second time it returned. The parents, with my concurrence, decided to resort no more to surgical interference, and Dr. Mann informs me that sloughing of the mass soon occurred, and the child died.

This tumour was examined by Dr. Mann, and found to consist of the microscopic elements described by Lebert as characteristic of the fibroplastic tumour, and by Paget of the recurrent fibroid.

*Meeting, April 7th, 1874.**Case of Imperforate Rectum.*

Dr. POOLEY read a paper on a case of imperforate rectum, upon which he had operated by incision, but unsuccessfully, the child dying seven hours after the operation.*

A Case of Ovarian Tumour complicated with Ascites—Ovariectomy—Recovery.

Dr. PEASLEE exhibited an ovarian tumour removed by him recently. Dr. T. G. Thomas and other high authorities believe that the very rapid increase of fluid in ascites complicating an ovarian tumour indicates the malignancy of the latter. Dr. Peaslee has already stated in his book on diseases of the ovary that this opinion is incorrect, and cites the present case as an additional proof. The cause of the rapid increase of the ascitic fluid is the bursting of one of the cysts of the, of course, multilocular ovarian tumour, the *papillæ* lining the internal surface of which cyst then secrete into the abdominal cavity, the fluid contained in which is thus both ovarian and ascitic. A patient then operated upon stands the same chances of recovery as in any ordinary case of cystic disease.

In this case the abdominal enlargement was first noticed last October, and supposed to be ascites; the patient was tapped, and 40 lbs. of fluid were removed. The abdomen filled again very rapidly, and was soon as large as before. Dr. Peaslee first saw the lady about a month ago, and on examination per vaginam found an ovarian cyst in the pelvis. He advised ovariectomy, which was performed two weeks ago. An exploratory incision was first made, by which 35 lbs. of fluid were evacuated, and the hand was then introduced and a small ovarian tumour found, which, when removed entire, weighed about 4 lbs., and measured $4 \times 5 \times 6$ inches in diameter. A double ligature was applied and the pedicle being very short, the tumour was dissected off from it. A rubber tube was introduced for three days to give exit to the ascitic fluid which might form; after that period no more fluid was secreted, and the tube was removed. The patient is making a perfect recovery, the pulse never having been above 84.

A Case of Constriction of the Colon by Peritoneal Bands and Impaction of Feces during Pregnancy.

Dr. CHAMBERLAIN exhibited a four-months' fetus enclosed in the membranes, which was removed post-mortem from a lady whom he saw in consultation. When called, he found the abdomen of the patient much distended, very tympanitic, and distorted towards the right side. There was dulness on percussion over the ascending colon, only moderate dulness over the descending colon. The diagnosis was intestinal obstruction and impaction of feces in the

ascending colon. The possibility of this obstruction being caused by peritoneal bands was thought of. The indication was to evacuate the bowels. Four pints of oxgall and warm water were injected by hydrostatic pressure without producing an evacuation.

To relieve the excessive tympanites and facilitate further exploration, the intestines were tapped with the aspirator; on piercing the transverse colon, a moderate quantity of gas escaped, causing slight relief; when the ascending colon was tapped, only pultaceous fecal matter escaped. The exit of a gangrenous odour on perforating the abdominal cavity proper settled the question of operating. By a vaginal examination the woman was found to be in about the fourth month of pregnancy. She died yesterday of pulmonary edema and exhaustion. At the post-mortem a tube was passed to the angle of the transverse and descending colon, which were found empty; above this point the colon was gangrenous. The transverse colon was bridged and constricted by two firm peritonic bands passing to the small intestine. No traces of the punctures made by the aspirator could be found either on the peritoneal or mucous surface of the intestines. There was but little reddish serum in the abdominal cavity. If these peritonic bands could have been diagnosed, would not laparotomy have been justifiable to allow of their division, which could easily have been effected, as they contained no vessels or important structures?

A Specimen of an Infant Uterus Bicornis Duplex and Vagina Septa.

Dr. MANN exhibited a specimen of a uterus bicornis duplex or bicameratus, or septus (Klob) and vagina septa, from an otherwise entirely well-formed nine-months' fetus. The cornea of the uterus are very distinct and widely separated. The depression in the centre of the fundus is very well marked, and the whole uterine, cervical, and vaginal canal divided into two equal halves by a firm septum.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting, August 7th, 1873.

DR. W. GOODELL, *President, in the Chair.*

A Specimen of Senile Uterus.

Dr. BEECHER exhibited the uterus of a woman eighty-nine years of age.

This uterus was very small, and contained in its cavity a small quantity of a dark-coloured fluid. The vaginal portion of the cervix was absent.

*Meeting, October 2nd, 1873.**Cases of Congenital Malformation.*

Dr. INGHAM exhibited for Dr. Allison a fetus of about four and a half months, with the cord wound once around the right thigh, making a deep groove in the integument. Had the fetus lived to maturity it would undoubtedly have been born with a congenital deficiency of the right leg. He also presented the ovaries taken from a woman of about sixty years of age, in one of which an apparent corpus luteum of pregnancy was present.

Dr. CATHCART exhibited a man with congenital deficiency of the hand. All the bones of the wrist were present, and two nodules of bone representing the fingers.

Quinine as an Oxytocic.

Dr. PACKARD related the following case : A lady had been confined twice ; both labours tedious, the shortest thirty-six hours long. Three weeks before the expected time of a third confinement she contracted a cold, for which he gave her quinine, six grains per day. Thirteen days before time he was again sent for, and found the patient in labour. Two points here suggest themselves : first, would any quantity of quinine produce labour ? second, would so small a quantity ? On examination the os was not dilated, though some water had come away. At half-past ten P.M. he was sent for, and found the os sufficiently dilated to admit the fingers.

No change took place for the next two hours.

At two o'clock Squibb's ether was given, the patient taking it herself. At twenty minutes past three the child was born and the placenta delivered.

As in this case the ether had the effect of dilating the os uteri, this fact is opposed to the idea advanced some years ago, that the administration of anesthetics lessened the expulsive pains. He thought this case showed that ether will in many cases positively promote the expulsive powers of the uterus.

The Use of Ether during Labour.

With regard to the action of ether, Dr. Smith remarked that many cases present a condition of spasmodic contraction of the neck of the uterus, in which anesthetics have an admirable effect. In these cases labour goes on with violent contractions, and the os uteri will not relax when the head presses upon it. Here ether will be of service by its property of inducing relaxation.

In other cases he thought that ether retards labour by enfeebling the power of the patient. In *multiparæ*, where the os is in a yielding condition, there is no reason to expect delay from that source ; hence ether retards labour by impairing the voluntary contractions which are so useful. The patient cannot bear down, because consciousness is

impaired and volition is absent. If the patient insists, we may use ether as a placebo, only upon condition that she will bear down.

The prolonged use of ether will impair the vitality of the fetus. He had rarely seen a case in which the use of ether was prolonged in which the child did not require some effort to revive it.

Meeting, November 6th, 1873.

Case of Puerperal Septicemia.

Dr. INGHAM exhibited the uterus and its appendages of a patient who had recently died from puerperal fever in the wards of the Philadelphia Hospital. The history of the case was interesting from its lack of similarity to the other cases of puerperal fever that the doctor had seen in the same wards. From the commencement, two days after labour, the tongue was dry and brown, the intellect was clouded, the temperature varied irregularly from 101° to 104° , and did not always accord with the rapidity of the pulse. The case had been treated with quinine, turpentine, and Dover's powder. She, however, died on the eighth day. The post-mortem examination, made thirty-two hours after death, did not reveal any cause of death, except some general peritonitis. There was an ulcer at the posterior fourchette of the vulva, the seat of a greyish, diphtheritic-like exudation. The peritoneum around the uterus and ovaries was somewhat congested, but there was no parametritis. The brain was congested; the liver, kidneys, and heart were fatty.

This seemed to be a case of puerperal septicemia, without any special local lesion.

Report of an Epidemic of Puerperal Fever.

Dr. J. S. PARRY remarked that the present epidemic of puerperal fever appeared in Blockley Hospital four years ago, the first case occurring Jan. 15th, 1870. It has been characterized by diphtheric deposit about the vulva, vagina, uterus, and sometimes on other portions of the body. This deposit places itself upon slight abrasions or injuries occurring during delivery to the fourchette or posterior portion of the vaginal wall. The deposit is generally greater than in the specimen presented, sometimes lining the entire vagina and uterus.

In inflammations, not puerperal, as well as puerperal, we are almost always likely to have involvement of the parts around the uterus. We have intense pain about the lower part of the abdomen. If the uterus be examined, it will be found large and tender; from this point the swelling extends above the uterus, and involves the entire peritoneum.

This case differed from those which had occurred previously in the wards. At the outbreak of the epidemic it was associated with pneumonia and relapsing fever, then prevailing in the hospital. In

the first stage of the disease, the tongue was covered with a whitish fur, but with a clean tip ; in the second stage the tongue became dry, brown, the fur coming off in flakes. This case again differed in some particulars of temperature. Generally in this epidemic the temperature rises rapidly to 105° or 106° in a few hours. The temperature falls alike in good and bad cases. In unfavourable cases it falls rapidly before death, as if the patient was going to recover, and if this fall is not accompanied with other favourable symptoms, it portends death. The first indication of health is the morning remission ; that gradually increases until it is like that of a quotidian intermittent. The tendency is then for the temperature to fall below the normal standard, to 97° . Sometimes there is collapse. In Dr. Ingram's case there was stupor.

The first case attacked at Blockley, in 1870, was seized with acute puerperal mania, as was supposed. She died. It was found to be violent peritonitis. In four other cases he had noticed fierce delirium. This, however, is by no means characteristic of the disease. There is nothing more sudden than the changes in the condition of these women. In the morning they are cheerful and smiling, and seem to be well, yet they are consumed by fever ; pulse rapid, features pale and shrunken, and death is written upon their foreheads. They sink and die without a struggle.

With regard to the treatment, Dr. Parry remarked that he had tried faithfully chloral, the sulphites, quinia, and all of the zymotic agents, and he relies upon the administration of opium in enormous doses, if necessary. One woman took $1\frac{1}{2}$ grains of opium every two hours for several days. His experience with intra-uterine injections induced him to abandon them entirely. They seem to increase the local trouble and pain, and have been of no benefit whatever.

Dr. INGRAM remarked that this was the first case in which he had seen the brown tongue. In several other cases the tongue had a uniform triangular space, at the tip free from deposit.

In all his cases the temperature seemed to be controlled by large doses of quinia.

In one case in which the morning temperature was 103° and evening 102° , the administration of quinia and Dover's powder reduced the temperature from 103° to 101° . In this case up to six weeks there had been no change in the character of the tongue. Whenever the quinia is cut down the temperature rises. The other cases present the same general characteristics.

The Correction of Difficult Presentations by Manipulation.

Dr. PARRY read a paper on manipulation by the hand in correcting difficult presentations.

He advocated the introduction of the hand (the patient being thoroughly etherized) with the back to the hollow of the sacrum, grasping the head of the child firmly, and then, by lifting the head above the brim of the pelvis, the desired movement can be effected.

If the presentation is a face, it can be converted into a vertex presentation. If the position be occipito-posterior, it may be changed by rotation above the brim of the pelvis into an occipito-anterior position.

Meeting, December 4th, 1873.

Case of Death following the Use of Sponge-Tents.

Dr. DE. F. WILLARD exhibited the uterus of a woman who had died after dilatation of the cervix uteri by sponge-tents. The patient had been married for eight years, but had never become pregnant. At one time, however, she suspected pregnancy from having a six weeks' intermission between two menstrual periods, followed by a discharge of clots.

Before marriage she was regular, but afterwards the menses were scanty and painful. After he had introduced a pessary to relieve a slight ante flexion, the menses became more profuse and less painful. Offspring being earnestly desired, he introduced a sponge-tent to dilate the cervical canal, which was very narrow. The tent slightly dilated the canal, but as it closed up again, he introduced a larger one, which dilated the canal to the size of the little finger. This gave neuralgic pains, which she bore badly, although a stout-bodied woman. On a Friday he removed this tent and introduced a smaller one. Contrary to orders the patient worked the next day (Saturday) at the sewing-machine. On Sunday morning he found her with a tender abdomen, extreme pain, fever, &c. The tent was discovered in the vagina, having slipped out of the canal.

The patient was placed upon opiates and supporting treatment, but died on the ninth day.

On post-mortem examination a small amount of serous exudation was found in the cavity of the abdomen. The parietal layer of the peritoneum was covered with lymph. An abscess containing about an ounce and a half of pus lay on the left side of the uterus. There had been extensive inflammation of the pelvic viscera; probably, at first, peri-uterine cellulitis, and then general peritonitis.

In the discussion which ensued, Dr. Ellwood Wilson reported an analogous case. The patient was desirous of becoming pregnant; she suffered with painful menstruation from malformation of the neck of the uterus. He introduced a sponge-tent on a Thursday. Fearing insufficient dilatation, he introduced another on Saturday morning. This was left in until Sunday morning. She seemed so well that he gave her permission to go downstairs. She, however, not only did this, but in the evening went to church. In the night she had a chill—on Monday peritonitis set in—on Tuesday she died.

Dr. H. LENOX HODGE also had seen a fatal case. He thought the use of tents was more dangerous than the profession believed.

His case differed from the others in this particular, that the patient had been kept perfectly quiet after the introduction of the tents. The dilatation was desired by her husband, himself a physician, to facilitate the diagnosis of a suspected tumour. The first tent was introduced on Saturday, the second and third on Sunday and Monday respectively. Before the removal of the last, she complained of acute abdominal pain, and died of peritonitis in four days after. An autopsy revealed a double ovarian tumour, with the Fallopian tube of the right side firmly adherent to the uterus.

Dr. J. L. LUDLOW asked whether the danger in the use of the tents was not due to abnormal growths or to some other abnormal condition of the uterus.

Dr. HODGE replied that in two of the fatal cases mentioned the uteri were healthy with the exception of a narrowing of the canal of the cervix.

Dr. MCCALL remarked that a condition of perfect health does not reduce the risk. He related a case in which peritonitis followed the repeated use of the sponge-tent; the patient fortunately recovered.

Dr. A. H. SMITH remarked that the only fatal case which he could attribute to the use of a tent was one complicated with a morbid growth. In this case he had once dilated the uterus successfully, and removed the tumour with an *écraseur*. The tumour recommenced to bleed eighteen months afterwards. He dilated with sponge-tents, and scraped away the tumour, which was a soft mass, probably a fibroid degenerating into a medullary sarcoma. Peritonitis set in, and the patient died in three days. He never hesitated to use tents, even in his office. The great danger was from their repeated use, when the uterus is in such an irritable condition that septic matter is readily absorbed. He did not hesitate to use a second tent, but he feared a third. He always required his patients to use an antiseptic wash while the tents were being used. For sterility or for dysmenorrhea he often put in a sponge-tent the day before menstruation, and kept it in throughout the flow.

Dr. GOODELL had one case to record of death following the use of three sponge-tents. It was a case of intramural tumour, and whether the peritonitis was owing to the tents or to the manipulation with finger and sound by the five physicians present, he could not say. He believed and thought that the history of fatal cases following the use of tents proved that it is not the first tent nor the first batch of tents passed into the cervical canal that does the mischief, but those put in at the second or third visit. The first tent irritates and congests the cervix; its removal abrades the mucous coat, and from this raw surface are absorbed the fetid discharges or septic material generated by the succeeding tents. Influenced by this opinion, he now first stretches open the canal by the uterine dilator, crowds in the largest sponge-tent possible, and then insinuates around it several small laminaria-tents. He thus tries to accomplish the necessary dilatation by one instalment of tents. The use of detergent vaginal

washes during the presence of the tents he always enjoins upon his patients.

Dr. J. CHESTON MORRIS stated that his experience led him to agree fully with these views. The first sponge-tent was free from danger, and so in a great measure was the second. It was the third introduction that, in his hands, had been followed by serious results.

Uterine Dilators.

Dr. ELLWOOD WILSON presented to the Museum of the Society a set of four uterine dilators, which he had used with great success. They were of varying sizes: the smallest dilated the canal to a width of three-eighths of an inch; the largest to one inch. He used one at a time, at intervals of three weeks, each dilatation occupying one-half minute of time.

Dr. WM. GOODELL stated that he had been using the uterine dilators with great satisfaction. He had cured several cases of dysmenorrhea, ante flexion, and retro flexion. He expands the cervical canal to its utmost width at one visit, and uses but two dilators—one small one to tunnel out the canal, and a large one to complete the dilatation. The act of dilatation so straightens out the womb that flexions are much improved thereby. With this instrument he also keeps the cervical canal stretched open while using intra-uterine injections. He found it invaluable for preparing the cervical canal for the reception of a stem-pessary or of sponge-tents.

Epithelial Casts of the Bladder.

Dr. J. H. HUTCHINSON presented two epithelial casts. The first was a cast passed from the vagina or the bladder of a young unmarried woman. She had great irritability of the bladder. Casts were passed on two occasions. The second cast presented also came from a young unmarried girl. The patient had suffered from hemorrhage from the uterus, and was treated with vaginal suppositories of sulphate of iron, belladonna and opium, &c. She pulled this cast, as she alleged, from the urethra. Dr. Hutchinson asked whether these casts were common as a result of injections into the vagina and bladder.

Meeting, January 5th, 1874.

Apoplectic Placenta.

Dr. INGHAM exhibited a placenta with a firmly organized blood clot extending completely around it, and gave the following history of the case:—Sarah F., aged thirty-four, was admitted into Dr. Ingham's wards, for diseases of women, in the Philadelphia Hospital, on November 1st, 1873. She had miscarried about two years before, but since that time had been comparatively well, menstruating regularly until August, 1873, when her menses due on the first did not appear. This suppression lasted until the middle of October, without

any special symptoms. At that time (October 12) she complained of a severe abdominal and pelvic pain, so severe that she was compelled to remain in bed for several days. Soon after the commencement of this attack she had a severe hemorrhage from the vagina, which, however, stopped without treatment. She also stated that three days before admission to the hospital she had had another hemorrhage; but when examined carefully after her admission no traces of it could be found. She was then believed to be about four months advanced in pregnancy. From time to time after her admission she had discharges from the vagina, closely resembling in character the amniotic fluid, but free, however, from blood. On the 20th of December she had another hemorrhage, accompanied with considerable pelvic pain. The vagina was tamponed, but without avail, for the hemorrhage continued, and on the 25th she miscarried. The fetus was living, and about six months advanced in utero-gestation. The placenta came away without assistance. The entire border of the uterine surface of the placenta was occupied by a well-organized blood-clot, which was believed to date back to the October hemorrhage and illness. On lifting up the membranes this clot was found to have extended beyond the edge of the placenta, and was attached to the membranes by numerous small fibrous bands. The membranes were covered with patches of organized clots. The rest of the placenta was healthy. Dr. Ingham then stated that although he had seen a great many specimens of apoplectic placenta, he had never seen so complete a clot, and had never before seen these fibrous bands, the very existence of which indicated that there had been a considerable inflammatory action following the hemorrhage.

Obstetric Summary.

Cesarean Section performed on a Woman Rachitic to an Extreme Degree—Successful—Mother and Child Living.

By Dr. J. CERF MAYER, of the French Navy.

Ernestine Leher, born at Brest (Finisterre); thirty years of age; was the last child but one of a numerous family—eight girls and one boy; the boy died at seven years of age, and four girls also died at an early age.

Ernestine does not remember the diseases which carried off her sisters and brother. This unfortunate deformed creature, though knowing neither how to read nor to write, was somewhat remarkably intelligent. Her father still lives, is fifty-eight years of age, and in good health. Her mother died four years ago, fifty years of age, of tubercle in the lungs. Of the four remaining sisters, Ernestine alone had the sad misfortune to be afflicted with most pronounced rickets, as may readily be seen in the photographs. I saw some of

the sisters, who are mostly of the usual height. The eldest is rather tall, but in all one can discern manifestations of scrofulosis as it is generally seen among this class of the Brest population.

Our patient says she had a fall at the age of eighteen months, and from that time the rickety condition presented itself.

It is generally version which presents itself to us in these sad cases, and which seems to solve an infirmity the secret of which is not unknown to us.

Ernestine was not regular till eighteen years of age and was only slightly troubled with the diseases of childhood. From the death of her mother she was in deep misery ; her family having, so to speak, abandoned her ; she only lived by needlework, which barely provided her with the means of existence.

It was in these circumstances that she consented to a union which prevented her nearly dying of hunger. Her husband was but twenty-three years of age. He was a skilled workman, of medium height, and of a very lymphatic constitution. His respiratory organs were not in a very good state. He was of mediocre intelligence, of exceptionally good conduct, and is more than ever happy now with his wife and son Cesar.

The following is the exact measurement of our patient :—Height, 91 centimetres ; right arm from the coracoid apophysis to the olecranon, 16 centimetres ; fore arm of the same side, 20 centimetres ; left arm measured in like manner, 18 centimetres ; fore arm, 20 centimetres. The anterior aspects of the superior and inferior members had so marked a twist, that the measurements were taken in the greatest length, that is to say on the posterior aspects :—Right shoulder, 14 cent. ; left shoulder, 19 cent. ; right thigh, from the anterior superior spinous process to the patella, 20 cent. ; leg of the same side, 27 cent. ; left thigh, 24 cent. ; left leg, 27 cent. The left patella was entirely inwards, the right was normal. The feet and hands were rather well made. As regards the head and face there was nothing particular. The hair was luxuriant and very abundant, and of a magnificent black. The chest was very narrow and ridged in front. The respiratory organs required supervision. There was no abnormal heart sound. The abdomen had always been much developed even before pregnancy, and measured 74 centimetres.

Ernestine had been married fifteen months, and became pregnant almost directly. During the course of gestation her health did not suffer at all. Only when near the seventh month, having felt some pains, she sent for Madame Ollivier, a midwife.

Madame Ollivier, seeing such a case, would do nothing without the advice of Dr. Delattre. The latter, after a minute examination, asked the patient, Leher, to allow him to induce labour. She would not consent, believing that nature, a good mother in general, would do for her what she had done for others. In spite of the peril, in spite of reiterated supplications, Ernestine maintained her refusal, and M. Delattre and Madame Ollivier were forced to retire.

At last on the 30th of May pains began in the morning, and the pains succeeding each other with rapidity, the poor woman believed that the efforts of nature were being crowned with complete success.

Called to the patient towards half-past one in the afternoon, Dr. Delattre and myself found the following condition of things. Pains severe ; no presentation ; cervix much dilated ; waters not broken.

A silver stylet marked with centimetres introduced with all necessary precaution measured a pelvic capacity of $4\frac{1}{2}$ cent. This measurement not permitting us to attempt the employment of the cephalotribe, we called in consultation Drs. Echali r and Huart, and our brethren arrived at the same results.

After ripe reflexion, after having discussed all the chances of the two operations, cephalotripsy and Cesarean section, we preferred the latter ; cephalotripsy, having to be done at several repetitions, would fatally compromise by its duration a woman so deformed. At three o'clock, therefore, I performed the Cesarean section.

An incision 17 centimetres long was made in the median line a little outside the linea alba ; it commenced 3 cent. below the umbilicus, and ended one centimetre and a half above the pubis. The abdominal muscles were incised layer by layer, and in the same manner the cellular tissue and the peritoneum soon appeared. I took up this serous membrane with forceps, and made a small incision in the middle, and then on a grooved sound I slid up a straight bistoury and opened it from top to bottom. The patient remained all the time under the influence of chloroform, which was administered by Dr. Delattre with the apparatus in use in the Naval Hospital. She had a good pulse of 70.

After the incision of the peritoneum, a strong inspiratory movement took place, which would have pushed out the intestines but for the well-made and intelligent compression of Drs. Echali r and Huart, which kept them well in place.

The uterus soon appeared ; it was slightly violet-coloured. I incised it largely in the middle line, taking care not to wound either the bladder or small intestines. The amniotic membranes having been ruptured by M. Delattre before the first incision was made in the skin and during the first applications of the chloroform, had allowed all the amniotic fluid to drain off, so that not a drop was left to flow in the uterus or into the peritoneum. I washed these two organs with cold water, and after sponging, well dried them ; the membranes were then torn with a stylet, and the child appeared by the breech. It was readily extracted, the funis tied, and handed over to the midwife. It was a male child.

M. Delattre waited for uterine contractions to take the placenta and to practise a kind of enucleation with the index finger of the right hand.

The insertion of the placenta was normal, and at the end of a few minutes it became detached ; a gush of blood flowed, but its

quantity was not too abundant; the application of cold checked it; dry sponges were interposed, with a view to prevent, as much as possible, its escape into the peritoneum.

A small finger bandage, a kind of net, was passed into the vagina and through the uterine wound, to be tied under the pubis in a manner to permit later on the flow of pus or lochial discharge.

In place of following the different procedures proposed for this operation, the procedures of Tarnier, Lestocquoy, &c., I did not apply any suture to the uterus, I only united the abdominal wound by means of six silver sutures, and tightened them a little, but without too much constriction. The operation lasted twenty-five minutes, and the chloroform was maintained nearly the whole of this time. To omit nothing, I must say that this woman, who inhabited a very unwholesome ground floor on a moist soil, in a house where a veritable small population grovelled, was placed in a large spacious chamber exposed to the mid-day sun. If I cite these details, which may appear to be of small importance, it is because I am convinced, not only on account of my own experience, but also from that of distinguished surgeons, that success will not crown the operation in these great traumatisms unless the hygiene of the place and a salubrious air—which the patient can absorb as one eats good bread—come to the aid of the surgeon.

Dr. Kœberlé, as every one knows, independently of his great talent as an operator, attributes a large portion of his success to the hygienic and climatologic laws to which he subjects all his patients. As a first dressing a fenestrated compress lightly spread with cerate was applied to the wound, also compresses steeped in cold water and renewed, the whole being maintained in position by a body bandage moderately tightened. Skin hot; pulse frequent—110; thermometer 39° C. Diet, cold broth and warm claret. As soon as the patient was put in a well-made bed, I administered 3j of ergot of rye, which did not produce nausea, and was well borne.

Two hours after the operation, I returned to see my patient. The pulse was less frequent—100; the thermometer 39° C. No rigors. Some quinine was given by the mouth.

Evening.—She complains of some dryness of the throat; no headache; no rigors; tongue moist. Small bits of ice were administered. A mixture of chloral was prescribed for the night.

At midnight on my return I found her fatigued; she had been obliged to suspend her broth and wine; some vomiting had followed the chloral draught. The abdomen was somewhat swollen, but palpation could be made with some force without causing the least pain. Micturition was easily accomplished. Tongue continues moist. The thermometer is 38° C.

May 1st.—Skin moderately hot. Thermometer 38° C. Pulse 95. Broth, ice, wine, ergot, and quinine. The ergot and quinine are well taken.

May 2nd.—Skin not so hot. Pulse 95. Thermometer 38.3° C.

Urine passed several times, but no motions. Prescription : ice, broth, wine, sulphate of quinine, emulsion of castor oil in enema. Considerable escape of gas per anum, and expulsion of very black solid matter. No blood from the wound. Same dressing.

May 3rd.—General state satisfactory. Tongue excellent, moist. Pulse less frequent—88. Ice, broth, wine, sulphate of quinine. Vomiting having continued after the chloral, although the dose was diminished, the latter was suppressed and replaced by chlorhydrate of morphia, which procured for the patient some excellent sleep, and caused the disappearance of the fatigue which she experienced. After the escape of gas the belly became very soft, and the meteorism nearly disappeared.

From the 4th to the 14th the general condition kept good. The pulse came down to 80, and then to 78. The thermometer oscillated between 37.9° C., 37.6° C., and 37.7° C.

Emollient and oily injections were administered daily, and each time gave exit to black concrete matters. No hemorrhage during this lapse of time ; no lochial discharge ; no milk-fever.

On the sixth day the band in the vagina and uterus was removed. Frequent injections and washings with aromatic decoction and carbolic acid cleansed the vagina and womb. At this epoch a voluminous hemorrhoidal enlargement appeared, which caused sharp pains, but which disappeared on the application of extract of belladonna and cacao-butter. Castor oil collodion frequently applied to the abdomen during six or eight days much reduced the distension, which appeared shortly after the operation. Sulphate of quinine was given in lessened doses for about a fortnight.

June 15th.—The patient has been taken with sharp diarrhea. Poppy poultices and draught of bismuth and opium.

June 16th, 17th, 18th.—Persistence of enteritis ; stools, nevertheless, less numerous, but matters of a greenish colour not unlike chopped herbs.

This condition remained until the 20th, but from this time all the symptoms improved and gave place to a true convalescence. The diarrhea appeared to be due to a slight epidemic influence which reigned in the city. Here is a somewhat curious fact. At the approach of the diarrhea a phlegmasia alba seized the whole of the left member, a curious coincidence also on account of the seat of the disease affecting rather the side on which the greatest deformity existed. This phlegmasia lasted nearly twenty days ; it was combated by wadding, emollient poultices, mercurial inunctions, belladonna, and a tonic and reparative diet. During the whole disease the urinary function did not cease, and the urine, treated by classical methods, never disclosed anything abnormal.

On the 6th of July our little woman first went out accompanied by her child, thirty-seven days after the operation.

From the twelfth to the fifteenth days she was able to get up and take a few turns in her room.

As regards the child, it is well made, its features are very good, it is brought up with a bottle on broth. It weighed at its birth seven pounds, but at present it has only increased one pound.

In resuming, there was no symptom of metritis, of metro-peritonitis, or hemorrhage. The season at which the operation was performed no doubt also hastened the cure, and partaking entirely the ideas of so expert a master as Dr. Depaul, we are convinced, as he has proved (*Union Médicale*, 1870 : Discussion on the introduction of some modifications in the Cesarean operation), that what is really grave is not hemorrhage, but consecutive inflammation. In formulating laws as severe as for ovariectomy, we shall, we believe, come to be as fortunate in Paris as in the country.

We will only add, in conclusion, that in the great traumatisms, where the external air, the surrounding medium, comes nearly always to play so sad a rôle, we do not hesitate in employing so precious an agent as a salt of quinine ; on the physiological action of which we do not speak, but which here acts by analogy in the same manner as in paludal countries, where the smallest wound very often gives rise to frightful disorders, the course of which can only be stayed by the beneficent alkaloid.

Brest has been since the creation of its commercial port submitted to a sort of paludal influence, which we can only combat as in the torrid zone, by quinine in large doses, and we have in our personal knowledge a great number of cases to cite in which this salt has rendered the most signal service.

As to the method of operating, every one can bring a new contingent thereto, but we do not believe that therein is safety, but rather in the consecutive care, and above all in personal solicitude of the operator.—*Archives de Tocologie, &c.*, September, 1874.

Prolapse of the Umbilical Cord.

Dr. Engelmann finds the proportion of cases in which this occurs in *primiparæ* and *multiparæ* in the Lying-in House, amongst nearly 6000 cases, is one prolapse to 108 parturient *primiparæ* ; whereas in *multiparæ* the ratio is as 1 : 85, making the occurrence of the prolapse somewhat more frequent amongst *multiparæ* than amongst *primiparæ* (1.27 : 1). In vertex presentations, he believes the sacro-iliac *fossæ* to be the spaces in which the funis most frequently finds room to descend ; in foot, cross, or shoulder presentations the prolapse usually takes place in that part of the pelvis to which the fetal insertion of the funis is directed ; and this mostly being the sacrum, the cord is thrown into the shelter of one or the other of the sacro-iliac *fossæ*. A very full account is given of the post-mortem appearances in children who have died from compression of the prolapsed cord. In regard to the prognosis, he finds that out of 204 cases of vertex presentation the life of the child was saved in only 76, being 36.7 per cent., for which he gives reasons. The mortality among the face

presentations is smaller, four of six children being saved. In breech presentations only four out of ten were saved. Foot cases have been the most successful cases at his hospital. Among his 365 cases of prolapse, he has had 69 foot presentations, with 49 of the children, or 71 per cent., saved. Even in the out-door department 60 per cent. of all the cases of foot presentation with prolapse were saved. In transverse and shoulder presentations there was greater success than might have been expected, 50 per cent. of the 47 cases being saved. As a general rule, a prolapse taking place in a primipara gives a much less favourable prognosis for the child than in a multipara ; and for this also he assigns reasons.—*American Journal of Obstetrics.*

Gynecic Summary.

Menstruation.

Dr. A. Guérin, in *Le Mouvement Médical*, says :—There is no physiological condition so nearly resembling disease as that which produces every month in an adult woman a change so profound that it has been looked on as the expression of a morbid condition. I am not now concerned with the influence of menstruation on the anatomical modifications produced in the uterus itself. By observing attentively the organs of the female of an animal about to enter the period of rut, you will realize the condition of the genital organs of a human female at the menstrual period ; all those organs are increased in size, the uterus is injected, the ovaries are enlarged, the vagina becomes red, the vulva also reddens, grows turgid, and secretes a mucus having a certain odour ; the animal appears sad. The same signs may be observed in a woman ; the vulva is of a reddish-purple, the uterine cervix is hot, sometimes painful ; the uterine mucous membrane can scarcely be distinguished from an inflamed mucous membrane. The superficial vessels are greatly developed, and their interlacements take the form of lozenges around the glandular orifices. According to some authors, it becomes like velvet, but to what extent I do not know ; but its vascularity is certainly augmented, even the small glands and the mucous membrane itself have increased in size. Coste exhibited specimens a centimètre in thickness, which he had observed at the period of menstruation. Now, you know that in a normal state the thickness does not exceed two or three millimètres. Thus there is a complete analogy with inflammation—extraordinary vascularity, hypertrophy of the glands, hypertrophy of the mucous membrane, which forms such folds that the uterine cavity seems hardly able to contain it. There is no similar example in physiology.

Menstruation takes place generally every month, every twenty-eight or thirty days ; and when the periodical return is irregular, the

irregularity is most often due to ill-health, the cause of which must be sought, if we do not intend to let the evil increase. The length of each menstrual period varies: it is usually about a week; with some women it lasts only a day, or even a few hours, but this is exceptional; the length of the period has no known influence on the sexual functions as its regularity has on the possibility of fecundation; whereas the persistence of the catamenia may have a contrary influence and produce sterility. The quantity of blood lost at these periods is even more variable than their length; you will not find two authors agreed as to this quantity. I find myself asking what means could be used to make the calculation. Hippocrates had made it, but we are not well acquainted with the measure that he used. According to Virey, a woman loses, on an average, half a pound of blood; according to Cazeaux, the quantity varies from 80 to 150 grammes. It varies, indeed, with individuals and races; in general those of the South lose a great deal of blood, those of the North much less. The equatorial races, according to Virey, lose as much as 750 grammes of blood; Spaniards and negresses lose a great deal. Even the habits of life have a very great influence. Women in the country lose less than those in town; the rich lose more than the poor. A luxurious and an intellectual life have each a manifest influence, and imagination plays a part in some cases, for we see it hasten the epoch of the first menstruation. In the country girls begin their menstruation later than in towns; and even in the great industrial centres, where want is more often felt than in the country, the period of puberty is advanced; it is because the education of the mind there goes on at a much greater rate. In the centre of France the age of puberty varies in general from twelve to sixteen years—*i.e.*, from ten to twelve in the South, but earlier still at Paris and Lyons. In these two large towns there exist numerous means of waking up the intelligence—pictures, reading, theatres, all of which have an undoubted influence. In a word, everything which excites precocious ideas in a child's mind, everything which tends to hasten puberty, may give birth to the idea of conception. Among certain populations in New Guinea little girls are delivered up to men in order that they may arrive more quickly at a marriageable age; a traveller has even related that at "Porte Réal," with the same object, it is the custom to introduce a packet of ants into the vagina.—*Paris Medical Record.*

Pædiatric Summary.

CLINICAL LECTURE ON CROUP.

By Dr. H. ROGER, Physician to the Children's Hospital at Paris.*

M. Roger had exhibited at a single clinique a great many more cases of croup than one would see in two or three years of private

* Translated for the *Paris Medical Record* from *Le Mouvement Médical.*

practice, where the disease is not so common as one might at first be disposed to think. What one often meets with in practice is *false* croup; for example, in Paris there are about one hundred cases per day, while the hospital is the ordinary theatre of *true* croup, and but rarely the refuge of false croup. The reason of this is easy to see; it is because croup without false membranes does not last, or lasts only a few hours, and the little patients, being suddenly attacked in the night, are not sent to the hospital.

Croup, at Paris, is much more frequent than it was thirty or forty years ago; it is true that the population was then less by two-thirds than it is now, for in 1832 (the year of the cholera) the capital contained only 745,000 inhabitants. There exists, however, at the present time, a notable difference between the different kinds of croup; we have only to read the statistics to see that in membranous sore throat one out of every two patients dies, but in croup four out of five. We are, then, naturally impressed when we see so large a number of cases of croup. Apropos of this, M. Roger reminds us that when he was *interne* at the Children's Hospital, under M. Guersant, he saw during a whole year only four or five cases of croup. In the present day tracheotomy is performed about a hundred times a year, and M. Roger has seen even two hundred cases of croup operated on in a single year; at St. Eugénie's Hospital the number is still higher. Considering then, that there are on an average from two to three hundred operations annually in the two hospitals, we may conclude that there are about five hundred cases of croup. Formerly there were very few operations performed, three or four in the year. In the present day, however, the number of cures is greater.

Croup is a contagious disease which operates in epidemics of greater or less gravity, and which presents in different cases differences as to its history, its symptoms, and its form. To illustrate this M. Roger presented six little patients whose cases in more than one particular excited some interest. The first case was that of a little girl suffering from typhoid fever, who had been seized with membranous sore throat, which threatened to become croup; the second was a boy in M. Labric's ward, who was attacked with croup and measles at the same time; then another little girl and another little boy, operated on on the 9th April; in these cases the illness had begun by sore throat which became membranous, followed by croup. Then came a boy who had been operated on on March 31st, and who went on as well as possible. Lastly, a little girl, cured of croup, but who was at the time suffering from pneumonia, which came on during her convalescence.

What does clinical observation teach us? That there is a false croup and a true croup. False croup is simple inflammatory laryngitis, shown by the redness of the laryngeal membrane; in the more severe cases it is complicated by edema, but *there never exist what are called false membranes*.

What then is true croup? We must begin by explaining certain

words. It has been said that there are two kinds of croup, *inflammatory* or *strangulatory*, and *common* croup. This last is not a satisfactory name, and is inexplicable by any clinical observation. It is, in fact, the same with croup as with scarlet fever, for example, in which we admit two degrees but not two kinds of scarlet fever. In croup, says M. Roger, the degree of poisoning is in proportion to the length of the false membranes.

Localized croup has also been called *herpetic croup*. This word gives an incorrect idea of the thing; the mistake consists in trying to make a variety of it; it would be better to call it a *mild* form, in opposition to the *generalized* or *malignant* form.

Croup is very variable also in its mode of generalization, whether there exists a laryngeal, or pharyngeal, or bronchial lesion; sometimes there is also coryza or sore throat. This croup has been called *infectious* or *toxic*. What constitutes the gravity of the disease is not, properly speaking, the false membrane, for the operation does away at once with that obstacle, but its reproduction and propagation.

Croup may be *primitive* or *secondary*. Secondary croup occurs in the course of a disease already existing, and has evidently a pathological connexion with the first illness. It may succeed *measles*, in which the laryngeal-bronchitic element has been predominant, and in which children are sometimes attacked by severe laryngo-bronchitis, which may become transformed into secondary croup. In the same way, in scarlet fever, there is a scarlet-fever sore throat, membranous, which sometimes, though not often (as Trousseau and G. See have observed), by invading the larynx, may become secondary croup. In the case of the little patient in M. Labric's ward it is not one of secondary croup, because the croup and the measles appeared at the same time: the false membrane was first seen March 30th, the croup, properly speaking, on the 8th April, measles having shown itself on the 4th April.

How shall we name the other forms of croup, which appear as complications; for example, that in typhoid fever, where no pathological relation can be said to exist between the two diseases? In these cases the croup is quite accidental.

It remains, then, to find out what epithet should be applied to the croup which succeeds severe membranous sore throat, and which is, in fact, characterized by the extension of the false membranes to the larynx. M. Roger calls it *successive* and not *secondary*. The same thing may be said of the croup, which begins by a membranous coryza, the plastic productions invade the larynx equally in this case, and it is again the same process of intoxication.

Etiology.—Croup is a *specific* and contagious disease. This definition justifies all the causes attributed to the disease. Forty years ago *cold* was said to have a great share in its production; that notion is true in so far that in the cold season croup often assumes a more serious character, being complicated with inflammation of the res-

piratory organs. Thus, at the present moment (April), instead of twenty-five per cent. as the proportion of cures, we find thirty and even forty per cent. Season and climate, however, have no absolute influence ; as examples of this we may cite the epidemics which took place in the seventeenth century in Spain and Italy, and the Syrian ulcer described by Arétée, of Cappadocia. (In Cappadocia the thermometer marks 38° C. in the shade.) If misery has any influence in determining croup, it is owing to the crowding, the packing up, if one may say so, which result from it, and which constitute the most favourable conditions for contagion. *Sex* has no influence on croup. *Age*, on the contrary, has certain privileges in this respect. Although a person of any age may have croup, children are the most often attacked, and that principally between three and four years of age. In second childhood croup is rare ; and it is quite the exception with adults.

As for the *contagiousness* of croup, it is very great and only too evident, and more evident in town than in hospital. Let us take as an example one personal experience among a thousand, related by M. Roger. He was called to Boulogne-sur-Mer to see a child attacked by croup, but he arrived an hour too late, as the child was dead. The ordinary medical attendant, a very able practitioner, former *interne* at the Children's Hospital, had taken the precaution of sending the other two children to Paris. The father also returned to Paris, and, notwithstanding the time (fourteen days) that had elapsed since the death of the first child, the other two children were attacked with the disease, and carried off in a few hours. Have we not had the grief of numbering also among its victims some of our illustrious masters—Gillette, Valleix, the son of M. Blache ? to these names, whom we may designate the children's doctors, respect imposes on us the duty of adding another compatriot, the son of M. de Salle, an esteemed practitioner of Châlons-sur-Marne, who died a victim to his devotedness. Mothers are not exempt from the membranous sore throat and the croup of their children ; after them come the nurses ; lastly, more rarely it is true, the fathers take the disease.

Forms and Symptoms.—Croup presents three forms for consideration—the mild form ; the *medium* form, which is the most common ; and lastly, the *toxic* form—toxic from the onset, or rather in which the poison is evident.

M. Roger, in studying the symptoms of this affection, has no intention to describe them completely, nor to enter into every detail of the symptoms, but merely to speak of the more salient points and to dwell only upon those which are of importance in a clinical point of view. It is an easy matter to recognise mild croup from the grouping of the symptoms ; it is the same in this respect with toxic croup, as the phenomena of poisoning are very recognisable ; medium croup, on the contrary, offers certain difficulties, certain snares which are to be avoided, and of which it is well to be forewarned.

It is all-important to distinguish with care the *first period*—that is

to say, the *anginous period*, for croup suddenly setting in is rare. Bretonneau used to say, very rare; but the proportion which he has set forth, one in twenty or thirty, is exaggerated. We would give the ratio as one or two in ten; this croup commences in the larynx, especially if it succeeds measles; one can understand that in this case the poison has so much the greater hold, as the mucous membrane is already affected.

The anginous period is almost invariable, and is characterized by the usual phenomena of sore-throat: *a little pain* in the throat (it is necessary to bear in mind that amongst children *sore-throat is not painful*), some *redness* and *cough*, and a slight *dyspnea*. This period is, so to say, latent, and passes in general unperceived by the patients. Sometimes one discovers *false membranes*, which are then situated on the internal face of one or both tonsils, and which consist of patches more or less extensive, which are to be distinguished from the pultaceous or caseous exudation of ordinary sore-throat or tonsillitis. What puts one on the track of the disease is *adenitis*: the sub-maxillary glands, those at the angle of the lower jaw, and even those of the lateral and posterior cervical region are tumefied. The cough presents nothing particular, it is the cough of simple bronchitis. This period lasts two or three days.

Then come the phenomena of the *laryngeal period*; the poison of the throat is at the larynx. An *attack of suffocation* serves as prelude, and makes us think of croup. The *cough is hoarse, broken*, a little *rough* and *metallic*.

The *voice is suppressed almost suddenly* (a characteristic sign). The *respiration* gives some important characters of recognition: it is *slow, painful*; the chest heaves, the nostrils dilate, there is, in a word, *forcing* of the breath. A sign which is of great value is *noisy respirations*, audible at a distance, rough, at first intermittent, and which the change of position causes to cease, but continues more and more, and which exists no longer in inspiration only, but also in expiration. This is what is called *sawing laryngeal wheezing* (*sifflement laryngé serratique*) which becomes more and more manifest in the proportion in which the disease makes progress. Stethoscopic signs are absent; auscultation of the larynx elicits nothing else but a snoring; and there are, perhaps, few practitioners who have heard the *flapping sound* (*bruit de drapeau*) which M. Barth points out; M. Roger, for his part, has never heard it. In *auscultation of the chest* it is difficult to hear the minute vesicular sound, which is almost totally extinguished by the laryngeal snore. As for the rest, the air reaches the lungs in small quantity, and seems to pass into a contracted orifice.

There are tolerably simple means of distinguishing the true from the false croup. Thus, croup never commences all at once, but after two, three, or four days of prodromata. Edematous or erythematous laryngitis, on the contrary, commences directly with laryngeal symptoms; between midnight and one o'clock in the morning the cough resembles a sort of barking, the voice is retained, and the respiration

is free in the intervals of the attacks. Sometimes this laryngitis is more intense, and the attacks become more continuous, the fever is considerable, but the voice is not completely extinguished as in the true croup. Finally, by auscultation, one cannot perceive the absence of the vesicular murmur.

What are *diseases which can still simulate croup*?

1. *Edema of the larynx*; but it is exceedingly rare amongst children, and by the examination of the superior part of the arytenio-epiglottic folds all doubt is removed.

2. The introduction of *foreign bodies*, such as a cherry-stone, a bean, &c.: but there is no fever; besides, recollection comes in aid, as well as the other signs of which we have spoken.

3. *Retro-pharyngeal abscess*, which gives rise to these symptoms—cough, fever, difficulty of respiration, suffocation; but the examination of the throat suffices to put an end to all idea of croup.

Injections of Cod Liver Oil for Ascarides.

The *Journal des Connaissances Médicales* publishes a communication from Dr. Szerleki of Mulhouse, on a case of severe irritation of the anus and adjoining parts, which was very greatly relieved by injecting an ounce of cod liver oil into the rectum.

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

“Nomenclature of Diseases of the United States Marine-Hospital Service.” Prepared by J. M. Woodworth, M.D. Washington, 1874.

“A Report of the Reduction of Two Cases of Chronic Inversion of the Uterus.” By Professor T. P. White, M.D. N.Y. Albany, 1874.

“The Pathology and Treatment of Diseases of the Ovaries.” Being the Hastings Prize Essay of 1873. By Lawson Tait, F.R.C.S. Ed. and Eng. (Exam.) London: Smith and Elder, 1874.

“Kin-Se Q-Setzu: or, Modern Medical News.” A Bi-monthly Medical Journal in the Japanese Language. Edited by Stuart Eldridge, M.D. Hakodate, Japan.

Communications have been received from Dr. Thomas Radford, Montague Palmer, Esq. (whose cases we shall be happy to receive), Dr. A. Dunbar Walker, Dr. Stuart Eldridge, Japan; Dr. Edis, Dr. Nathan Bozeman, Coburg; Dr. Stephenson, Edinburgh; Dr. Wiltshire, Dr. Routh, Dr. A. Gauvin, Paris, and Dr. Matthews Duncan.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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Original Communications.

THE INFLUENCE OF POSTURE ON THE HEALTH OF WOMEN.

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CHAPTER I.

GENERAL CONSIDERATIONS ON POSTURE.

1. *Introductory.*

IT is impossible to believe that the disorders of women so frequently met with in the present day can be attributable to natural causes. Some may be accounted for by the accidents which occur at critical periods both in the married and single states ; others may have a constitutional or specific origin, whilst many doubtless result from want of fresh air and exercise, errors in dress, late hours, excessive dancing, or riding, and other imprudences ; but there still remains a large number the source of which it is thought must be referred purely to posture.

The effects of posture upon the health of women are not sufficiently appreciated. This is probably due to the difficulty of observing the influence which gravitation has upon the fluids and solids of our bodies ; for, ever acting and varying in its action with each change of position, it necessarily produces numerous and diverse effects, which, being

developed slowly and insidiously, are very liable to be overlooked, or perhaps referred to any other cause but the right. The subject of gravitatory influence in general medicine is one of great complexity and extent, upon which many volumes ought to be written. Only a brief imperfect essay is here presented to the reader. In it an attempt has been made to handle as simply as possible a class of facts hitherto much neglected, and to endeavour to demonstrate how potently the great law acts in producing, perpetuating, and curing the disorders to which women are peculiarly subject.

The female generative organs may, for all practical purposes, be considered as floating in a basin, the inside of which is padded with muscles, fat, &c. This bony basin or pelvis contains besides, in front, the bladder, and behind, the bowel, each of which is constantly varying in size as it receives or expels its contents. It is also tilted forwards, and the degree of inclination which it is made to assume will hereafter be shown to exercise an important influence upon the health of women. Attached to the rim of the pelvis are the abdominal walls, which pass upwards and form a pouch, in which the intestines, &c., are contained. Above this is the cavity of the chest, and between, ascending and descending, the diaphragm, which with each respiration disturbs the abdominal and pelvic contents.

There are two important anatomical facts relating to the female generative organs which must always be borne in mind—viz., their extreme mobility and vascularity. To these prominent characteristics frequent allusion will be made in the following pages, for it is evident that the more largely a part is supplied with blood-vessels, and the more easily it is displaced, so must it in like proportion be under the control of, and capable of being influenced by, gravitation.

There are also certain physiological considerations which we must remember if we would fully understand how morbid conditions may result from posture. The general effects of position upon the circulation are very remarkable. The heart's action increases in rapidity in proportion to the amount of muscular exertion required to maintain the body in any given attitude, *e.g.*, as the result of observation it has been

found that the pulse of a person standing being 85, it will fall to 76 when sitting, to 72 when reclining, and to 67 when recumbent. The bodies of the contracting muscles compress the veins and impel the blood contained in them towards the heart, and thus the circulation is accelerated. This action of the muscles may be well observed in the ordinary operation of bleeding from the arm. The stream of blood from the wound is manifestly increased when the muscles which move the fingers are made to contract.

There is another effect of posture upon the circulation with which every one is familiar. The swollen and prominent condition of the veins at the back of the hand when it is hanging down, and their rapid contraction and disappearance when it is held up, may be seen at any time, although in some it is much more marked than in others. The simple experiment, however, illustrates a great physiological fact, and shows that the further the blood is removed from the propelling action of the heart the more is it under the influence of gravitation. In the arteries the heart's power is paramount. In the veins muscular action and gravitation exercise their sway. The flushing of the face when the head is held down is another well known illustration of the effects of gravitation upon the contents of the blood-vessels. The redness vanishes at once when the erect posture is resumed. Surgeons have long recognised and made use of this gravitatory influence. It is remarkable how soon the heat, redness and swelling of an inflamed limb decrease when it is raised.

There are other examples of temporary physiological hyperemy of the blood-vessels, which affect us more nearly. It has been stated that the reproductive organs of women are largely supplied with blood-vessels. The greater proportion of these vessels are veins accumulated together, so as to form large plexuses, which exhibit the peculiar phenomenon of erectility. The womb itself is subject to this condition. Upon the reception of the proper stimulus, it becomes engorged with blood, increases in size and weight, and raises itself into a more or less erect position. "*Ubi stimulus ibi fluxus*," is an axiom as old as Hippocrates, and to no part of the body is it more applicable than to the womb and the

parts annexed to it. At every repetition of sexual excitement fulness and engorgement of the vessels take place. At every step in the process of reproduction, ovulation, nidation, and pregnancy, fluxion to a marked degree occurs, lasting for days or months. It is important to bear in mind these frequent determinations of blood to the sexual organs, for many of them require very little encouragement to make them pass the line which forms the boundary between physiological and pathological conditions. It is also necessary to keep before us the constant and antagonistic operation upon the circulation of muscular action and gravitation, and likewise the direct influence of these two forces upon the organs contained in the pelvis.

2. The Erect Posture.

The erect posture, although so noble and beautiful, may become to its owner a source of discomfort and misery. If women had bodies, like those of quadrupeds, always maintained in a horizontal position, they would doubtless escape a great many of the disorders to which they are liable. In nearly all animals the axis of the pelvis is parallel to that of the spine, but in the human female the relations of the two are very different.

A knowledge of the various pelvic postures is of great importance. The pelvis is capable of a considerable number of movements. Those which we must consider more particularly are its antero-posterior oscillations. In the erect posture these motions take place upon the balls and sockets of the hip joints, and in the sitting, upon the tuberosities of the ischia. In proportion to the amount of tilting backwards and forwards of the pelvis the plane of its inlet can be made to assume various angles of inclination. By forcibly flexing or extending the spine it may be altered from its natural angle of 54° , and made to form a line with the horizon, or perpendicular to it. Upon the proper maintenance of the pelvic inlet plane at its normal angle of inclination a woman's comfort and health greatly depend. When the pelvic inclination is natural, the line of the abdominal axis falls upon the anterior rim of the pelvis. When the body is bent

forward and the inlet plane lies horizontally, this same line falls into the centre of the pelvic cavity. In the former case the contents of the abdomen rest, when the body is erect, upon the front part of the pelvis. In the latter, they gravitate directly into the pelvis, compressing its contents, impairing the functions of the organs contained in it, or perhaps producing still more serious mischief. Any deviation of the pelvic inclination from the normal towards the horizontal direction is injurious. No matter to how small a degree, when it takes place the proper poise of the organs is at once destroyed, and the weight of the abdominal viscera begins to act in a wrong direction. Naturally, the pelvic contents are out of the line of the abdominal axis, now however they are placed immediately beneath it, and consequently have to sustain a burden of intestines, &c.—a load liable to be increased and aggravated by the weight of clothes, or by the succussion produced in walking, running, dancing, &c.

The influence of gravitation upon the reproductive organs when the body is erect varies considerably. It may either act on the organs themselves, or upon the blood with which they are supplied, and the effects thus produced are again capable of being much modified by inaction or exertion. As in the erect posture it is necessary to avoid the evil effects of gravitation by maintaining the normal pelvic inclination, so is it equally important to counteract its bad influence upon the circulation by motion. The erect attitude is essentially one of action. Poised with admirable accuracy, the body is ready to move instantaneously in any direction at the command of the will. For hours the upright position may, when the body is in a healthy state, be maintained without fatigue if the muscular system be only kept employed; a few minutes, however, are sufficient to produce weariness if inaction is enforced. Watch a person constrained to stand in one spot for a lengthened period, and you will soon observe several ingenious efforts made to alleviate the consequent uneasiness. First, the weight of the body is borne equally upon both legs. Then it is alternately shifted from one to the other. Next, the body is rocked in different

directions, so as to make the toes, heels, and sides of the feet each in turn bear the burden. Still, however, the weariness increases, and further relief is sought, either by leaning the body against some object within reach, or placing the elbows or hands upon any available projection.

Nature rebels against inaction when the body is erect. What are her reasons? Probably these :—In the absence of muscular exertion the circulation languishes, and the blood gravitates to the lower parts of the body, where it stagnates, and produces fulness of the vessels, or hypostatic hyperemy. This hyperemic condition, besides producing aching of the limbs, causes in women pain in the back, the reproductive organs being overdistended with blood ; and if any of the physiological fluxions happen to be taking place at the same time, of course the discomfort is materially augmented. If a woman, therefore, would keep her health, it is necessary that she should satisfy nature's demands. She must hold herself upright so as to maintain the normal pelvic inclination, and she must, when erect, keep in motion. Let her walk, run, skip, leap, dance, or perform gymnastic exercises of any kind, but move she must. The feet and legs were made for locomotion : the vertical posture was never intended to be one of rest.

3. *The Sitting Posture.*

The Ischium or sitting-bone, from its formation, at once decides the question as to whether sitting is a natural posture. The thick rounded tuberosity found at its lower part can be intended for no other purpose than that of supporting the body when in this position. It being then evidently intended that we should sit, there must be doubtless a healthy and harmless, as there is most certainly an abnormal and injurious mode of doing so. Sitting postures may be divided into natural and unnatural. Let us consider the latter first.

Of all the machines which civilization has invented for the torture of mankind, and of womankind more especially, there are few which perform their work more pertinaciously, widely, or cruelly, than the chair. It is difficult to account

for the almost universal adoption, at least in this country, of such an unscientific article of furniture. There is, without doubt, an instinct in the human race, which prompts them to raise their bodies to a higher level than that which nature has assigned. There is a feeling of satisfaction and superiority in being able to look down, even physically, upon our fellow creatures. The throne is elevated to do honour to the sovereign. The table is raised on a dais to show respect to the principal guests. Sitting in the dust is a sign of humility. This instinct of self-elevation displays itself in the absurd fashion, which never quite dies out, of wearing high heels and tall hats—the former, besides absurd, being unmistakably injurious, distorting the foot, destroying the perfect poise of the body, and producing abnormal pelvic inclination.

Perhaps then it was due to this peculiar vanity of physical exaltation that men first began to sit on stilts. There were, however, probably other reasons. The chair was found easier to rise from than the mat on the floor, and in large assemblies, individuals by its use, could be packed together in a smaller space. Let its advantages, however, be what they may, nature inexorably rebels against it, and will not long permit its use unresented. It is interesting to see the number of devices adopted to overcome the discomfort which this sitting posture causes. The most common is crossing one leg over the other. This is generally done in two ways. In one the under part of the knee; in the other, the side of the foot or ankle, is raised and made to rest upon the knee of the other leg. The result of the first position upon the circulation is easily visible, for the compression of the popliteal artery causes the foot to jump at the reception of every fresh supply of blood from the heart. To obviate the discomfort of dangling legs, people press into their service everything within reach capable of bearing the weight of their feet. All attempts at elegance of posture are disregarded if relief can only be obtained. Footstools, leg-rests, chairs, tables, mantelpieces, any things, all things, are eagerly sought for and used. No matter at what cost of furniture or decency the painful cutting into the thighs of

the chair's edge, and the aching of the pendulous hyperemic limbs must be relieved. Nature will have her way, and if we would sit comfortably we must do so in the manner she commands. Ladies, thanks to their skirts, can curl up their legs in numerous ingenious methods and so overcome the dangling difficulty ; but, on the whole, they suffer more from the chair than men. Propriety demands from them a stricter adherence to conventional postural rules. They cannot assume attitudes which in the other sex would pass unnoticed. Their shorter limbs also cause them greater discomfort as the height of chairs is made to suit the convenience of the male rather than of the female sex. It is impossible to resist quoting the following passage from Cowper's "Sofa," which was found emphatically marked in a copy of that poet's works belonging to a lady :—

"But restless was the chair ; the back erect
Distressed the weary loins that felt no ease,
The slippery seat betrayed the sliding part
That pressed it, and the feet hung dangling down,
Anxious in vain to find the distant floor."

To this unnatural dependent position of the legs, which some women maintain for nearly two-thirds of their lives, is doubtless due the swollen feet, ulcerated legs, and varicose veins, so frequently met with. The evils thus produced are only capable of being prevented or remedied by the use of a seat sufficiently large to hold the legs and support them horizontally.

A second objection to the use of the chair is its back. In sitting, as in standing, it is necessary that the normal pelvic inclination should be preserved, and it is also requisite that the body should not be maintained motionless. The effect of leaning against the back of a chair is to produce flexion of the spine, and an undue approximation of the plane of the pelvic inlet to the horizontal line, the result of which is, as has already been shown, to throw the weight of the abdominal viscera upon those of the pelvis. Another evil also results. The abdominal muscles which assist in keeping the body erect (their action in relation to the spine being as a string to a bow) are thrown out of use, and their retaining and supporting influence upon the abdominal

contents is consequently lost. The whole mass is abandoned to gravitation, and it falls a dead weight, compressing the reproductive organs, and producing among other ills the inelegant deformity called "pendulous belly." Leaning forward over desk, embroidery, easel, piano, &c., by relaxing the abdominal muscles has very much the same effect. Our grandmothers who are laughed at for sitting so upright in their seats, and who scorned to lean back or indulge in soft easy chairs, were nearer right than we; and if we would be healthy and strong, we shall have to abandon some of our luxurious habits, and return somewhat to the good old simple, brave, and rigid ways.

Muscular action being necessary when the body is upright to prevent retardation of the circulation and gravitation of the blood, the sitting posture should not be made one of repose. It is a very bad habit to sleep in a chair. The languid circulation is at this time more under gravitatory influence, and pelvic hyperemia necessarily results. Nature also still further objects to the sitting posture as one of rest, and makes it manifest by the fatigue and uneasiness caused by the weight of the hanging arms. The wisdom of this is evident, for why should the respiratory muscles have to undergo the unnecessary exertion of lifting at every inspiration two long pendulous masses of flesh and bone. Surely breathing is the last of our vital actions which should be encumbered. To overcome the discomfort produced by the weight of the arms our ingenuity is again taxed, and we see in consequence elbows on the table, arms crossed, hands clasped behind the neck, the elbow of one arm resting in the hand of the other, or both elbows supported on the arms with which upholsterers furnish our chairs. The weight of the head also becomes a source of uneasiness, and we therefore often find it upheld by the hand, the elbow being placed on the knee, or upon a table. Sitting upright when at rest is an unnatural posture, and the penalties attached to it cannot be escaped, for all the plans adopted for remedying its evils only increase them ten-fold.

We endeavour to escape the action demanded from us when sitting erect by using soft seats. This is another luxury

which produces ill effects by enabling a person to sit too long in one position. Nature enforces change of posture when the thing sat upon is unyielding. Watch an audience seated upon wooden benches, and you will soon observe the truth of this remark. However interested they may be, it will be noticed that the weight of the body is constantly being shifted from one point of pressure to another, an action which is almost performed automatically, so little impression does it make upon the consciousness of the individual who performs it. The rocking-chair is comfortable, inasmuch as it allows us easily to change our position, and thus conform in some degree to the necessity for action, which has been shown to exist. A woman can sit upright on a horse in motion for a long time without experiencing the weary aching which might be produced by riding for the same length of time in a railway carriage with soft arms for her elbows, and a stuffed cushion for her back. The simple reason of this is that in the saddle, without support of any kind to lean against, she has her muscles kept constantly in action. The two principal requirements which nature demands of her when sitting are satisfied. The circulation is accelerated by muscular contractions, and the normal pelvic inclination is, or ought to be, maintained.

What then is a natural and healthy sitting posture? You may see it any day in the nursery. A child sitting on the floor playing with its toys presents us with all the natural sitting attitudes in a very short time. The feet are in a line with the buttocks, and all the muscles in full play. A savage who is not acquainted with, or cannot indulge in the destructive luxuries of civilization, will show you the proper position in which to sit. You will see no dangling legs; on the contrary, you will perhaps find him holding the work on the ground before him steady with his feet, whilst he manipulates it with his hands.

Probably the most natural mode of sitting is that adopted by the Turks, and the most rational piece of furniture to sit upon is the divan. Lady Mary Wortley Montagu thus describes a Turkish lady's apartment:—"The rooms are all spread with Persian carpets, and raised at one end of them about two feet. This is the sofa, which is laid with a richer

sort of carpet, and all round it is a sort of couch, raised half a foot, covered with rich silk, according to the fancy or magnificence of the owner. Round about this are placed against the walls two rows of cushions ; the first very large, and the rest little ones. *These seats are so convenient and easy that I believe I shall never endure chairs again as long as I live.*" On a divan you may easily change your position, and assume any attitude ; if you tire of sitting, you may recline ; if you tire of reclining, you may lie down. There is nothing except its softness to induce you to maintain a posture longer than is good, and the legs are supported horizontally, as they should always be when at rest.

An effort has of late been made by upholsterers to overcome the inconveniences of the chair by making it low and long in the seat ; but the attempt, although it decreases the dangling difficulty, increases some others of greater importance ; as, however, these are more especially connected with the reclining posture, this will be more conveniently considered in the next section.

4. *The Reclining Posture.*

Reclining is the favourite posture of English ladies. Many of them often spend the greater part of the day in this attitude ; in the house on lounging chairs and luxurious couches, and out of doors in padded carriages, they maintain this fascinating position. Little do they know the mischief it is producing, or how dearly they may have to pay for their pleasure. Reclining is nevertheless a natural posture, but, like sitting, there is a right and wrong way of doing it.

There are four modes of reclining,—1st, upon the right side and one elbow ; 2nd, on the left side and the other elbow ; 3rd, on the abdomen and both elbows ; 4th, on the back and both elbows.

Of these positions the first three are the best, because in them the abdominal contents are supported by the surface on which the person is reclining, and the pelvis is tilted over so as to cause the reproductive organs to gravitate forward and upward towards the inlet of the pelvic cavity : the shoulders are also pressed back, expanding the chest, and giving increased power to the respiratory muscles. The

fourth position is the worst and most uncomfortable. In it the hands are rendered useless, the spine is bent forward or flexed, the chest is contracted, and respiration impeded. Besides this the abdominal walls are relaxed, the intestines badly supported, and worst of all, the pelvis is held in such a position as to facilitate the gravitation of blood to the reproductive organs, and the precipitation of these organs and the abdominal contents towards the natural orifices at the outlet of the pelvis, the soft and yielding floor of which has in this position no compensating counter-pressure, as is the case in sitting. Yet this is the favourite reclining posture of women, the only difference between it and the one usually adopted being the substitution of sloping backs and cushions as props in the place of arms and elbows. In this way a pernicious posture, naturally uncomfortable, and which was never intended to be maintained for any length of time, is not only made endurable but very pleasant. The support of the elbows not being required, the arms are set at liberty, and the hands may be employed in holding a needle or a novel. Thus luxury, convenience, and upholstery conspire together, and succeed in perpetuating a reclining posture, which is undoubtedly a fruitful cause of many of the disorders from which women suffer.

The art of reclining is not known in this country. Some people think it a relaxing and enervating posture, and this is true if it be practised in the manner just described. The Romans were not an effeminate race—the *triclinium* did not destroy the activity, vigour, and courage of those who used it—the bravest heroes the world has ever known have reclined at their meals and feasts. They did not, however, recline all day, nor upon their backs. Athletic exercises in the open air occupied a large portion of their time, and thus they secured for themselves that health and enjoyment of rest which is sweetest when earned by vigorous action.

“The sedentary stretch their lazy length
Where custom bids, but no refreshment find.”

The injurious habit of constantly reclining has a most deteriorating effect upon the muscles. It is a law of nature

that muscular tissue, if not used, should waste in bulk and strength. This law applies equally to the heart. We have seen that it beats thirteen times a minute less when the body is in the reclining posture than when it is erect. This continued decrease in the number of its contractions must have the same detrimental effect upon it as upon other muscles. From the weak heart thus produced feebleness of circulation follows; as a further consequence the blood becomes more under the influence of gravitation, and hyperemy results.

As a general law relating to human postures, it may be stated that when the body is at rest the maintenance of a column of its blood perpendicularly is contrary to nature and harmful in proportion to the length of time it is so held. This applies more particularly to the blood in veins—the relative amount of force required to propel blood vertically away from the centre of gravity and horizontally must be obvious. When the body is erect it is so arranged that the perpendicular columns of blood in the veins shall in a great measure be raised by the contraction of the muscles in their immediate neighbourhood. If, however, the body be maintained at rest in an erect or semi-erect posture, the propelling action of the muscles upon the blood is lost, the veins dilate, the action of their valves becomes impaired, and numerous morbid conditions result.*

The reclining posture is a good one when temporary rest only is required. When it is adopted, the first three positions are the best, but neither of these should be solely used. Changing from one to the other is conducive to comfort and health. The fourth, or dorsal reclamation, should be totally avoided by women, and more particularly when the reproductive organs are either from morbid or physiological causes in a state of hyperemy, or the general health in a feeble condition.

* These remarks apply with equal force to the male sex. Many disorders of the prostate gland (the analogue of the uterus) are without doubt aggravated and sometimes caused by continuously sitting or reclining in a wrong posture.

5. The Recumbent Posture.

The natural promptings which lead us to adopt various postures in a regular succession, from the erect to the sitting, from the sitting to the reclining, and from the reclining to the recumbent, are well worthy of notice. In the erect posture the legs are the first to feel uneasiness. To remedy this we sit. In the sitting posture the weight of the arms becomes a source of discomfort. To relieve this we recline. In the reclining posture, if no cushions or props are used, the elbows soon complain of their burden, and thus finally the recumbent position is assumed as the only one capable of affording complete rest.

But even in this posture, gravitation, although in a less marked degree, still holds its sway. Hypostatic hyperemia of the lungs in feeble bedridden patients is a well-known morbid condition. It is also thought that owing to the prevalent habit of sleeping on the right side, inflammations and effusions are more frequently met with on that side of the body.

The recumbent posture is of great service in restoring any loss of balance in the circulation which may have occurred during the day. Any accumulation of blood which may have gravitated into the lower parts of the body during the erect or semi-erect postures is gradually removed during the night when the body is horizontal; the dilated veins in the legs and pelvic cavity regain their tone and normal calibre, and the blood contained in them becomes natural in quantity and flows on uninterruptedly.

The maintenance of any particular pelvic inclination during the recumbent posture is of no very great importance. Our attention must now be directed to the position of the whole pelvis, and the relation it bears to the rest of the body. The worst of all the recumbent, as of the reclining, postures is upon the back. In this position the pelvis rests in such a way as to allow the viscera to gravitate into the depths of its cavity; and when there they are still further pressed down by the weight of urine which has accumulated during a long night. Nature protests in several ways against the

long continuance of the dorsal recumbent posture. Besides the unbecoming appearance of a vacant open-mouthed countenance, a person sleeping on the back incurs the penalties of a dry tongue and mouth, and dreadful dreams, and others within ear-shot are harrowed by various hideous sounds, of which it is difficult to say whether the sudden shriek or the prolonged snore is the more distressing. Lying on the back the pelvis is in such a position as to continue during the night the effects which have been produced during the day. By tilting the pelvis over, however, as is done when lying upon the side or face, the reproductive organs have a tendency to fall forward out of the pelvic cavity exactly in an opposite direction to that in which they gravitate when the body is erect. In this way, by a wise provision, a balance is effected, and any mal-position of the organs, as well as any circulatory embarrassment which may have occurred during the day is remedied at night.

But the relation which the pelvis bears to the rest of the body is also of great importance. When the body is recumbent it should rest upon a level plane. Soft feather beds produce an unnatural posture. The hips of a woman are the heaviest, as they are also the widest part of her body. Being the heaviest, they sink lowest into the yielding feathers, and being the widest, they are the highest when they rest upon a level mattress. These are two facts worthy of consideration. If the hips are allowed to become the most dependent part of the body for one-third of a woman's life, is it to be wondered at that the reproductive organs situated in their immediate locality should suffer from morbid gravitatory influences? Upon a level surface, when the body is recumbent, the hips are so raised that the blood naturally falls from them; and this is another of nature's methods of restoring during the night the equilibrium which may have been lost in the day.

Feather beds also act injuriously inasmuch as they allow the body to remain for too long a time in one posture without causing discomfort. Upon a mattress the body cannot long remain at rest in the same position. A sense of uneasiness is gradually produced, and even during sleep the body is

turned, and the plane of pressure shifted from one part to another. This again is another provision by which the evil effects of prolonged gravitatory influence are prevented.

Of all the recumbent postures then, that on the back is the worst ; those on the face and sides the best. The broad bearing surfaces of the trochanters seem to point to lateral recumbency as that which should be most generally adopted. But no position should be maintained for too long a time. To prevent this, and the pelvis from falling below the level of the rest of the body, it is therefore necessary that couches and beds should not be made too soft and yielding.

6. The Prostrate and Kneeling Postures.

These are doubtless natural postures. The tuberosity on the upper and fore part of the tibia is evidently intended to be a bearing surface upon which the weight of the body may be sustained when prostrate or kneeling. These postures are assumed when the hands are required to operate upon any object resting on a level with the feet. It is also an attitude expressive of submission or devotion. South of the Tweed kneeling is the posture assumed during prayer. It is necessary, therefore, to consider its medical aspects. The mode of kneeling erect and for a long time is very injurious, as in this position the body, when in a state of rest, remains vertical. Women suffer very much from the postures which they are obliged to maintain when in church, these positions being all perpendicular, and no muscular action possible. It is not infrequent to see worshippers resume their seats during the Psalms or a long anthem. The irksomeness and discomfort produced become unbearable, and in spite of the act attracting public attention, they must be relieved. Certainly in all forms of worship, the ritual which permits the most frequent change of position, is that which injures the health least, and allows the mind to devote itself to pious thoughts instead of to bodily afflictions.

When prostrate or in the knee-elbow position, as it is sometimes called, every influence of gravitation is to remove the blood and viscera from the pelvic cavity towards

the head. It has, therefore, a powerful action in remedying the pelvic hyperemy and impaction which erect postures may have caused. Naturally the prostrate attitude is frequently adopted. Children remain playing with objects on the floor for a long time in this position. Civilization has, however, besides chairs, given us tables, upon which everything may be placed within easy reach of the hands, whether their owners be sitting or standing. All implements and utensils with which the land is tilled or floors cleaned, have been provided with long handles to obviate the necessity for prostration. It is true we sometimes see a prostrate maiden scrubbing door-steps, but it must be admitted that there are few occupations now in which the attitude is obliged to be assumed.

It would, doubtless, be better for women were prostration more common; for, as has been already stated, a better circulatory balance would certainly be maintained by its occasional employment. For the relief of prolapsion and hyperemy it would have a far more powerful effect than any recumbent position. It is now, however, a posture which we seldom assume, and the results of its abolishment we have no means of calculating.

(To be continued.)

NOTE ON THE PROPOSED TREATMENT OF FIBROID TUMOURS OF THE UTERUS BY PUNCTURE.

By ALFRED MEADOWS, M.D., F.R.C.P.

Physician-Accoucheur to St. Mary's Hospital; Lecturer on Midwifery at the School.

THE treatment of fibroid tumours of the uterus has attracted more than ordinary attention of late years, and any one practically acquainted with the subject must admit that great and salutary advance has been made in the curative treatment of these cases. Increased knowledge and experience have here, as they always do in similar cases, taught us two things, two aspects I may term them of the same question; they have taught us not only what we can do,

but, and this is perhaps of equal importance, also what we cannot. There can be no doubt now that a very large number of these cases which were formerly deemed incurable can be safely attacked and perfectly cured. I am not, of course, referring to cases of fibroid polypi, or to polypoidal tumours of any kind; these without doubt are easily curable; and the man who fails to recognise such cases, or who, recognising them fails to remove them, is in the present state of knowledge guilty of neglect which is little short of criminal. But I refer now more particularly to cases where no pedicle exists; where the tumour is perfectly sessile upon the uterine wall; or where it is even embedded in the substance of the uterus itself. The difficulty no doubt in these cases is to determine the exact relations of these tumours to the uterine wall, or rather, I should say, to the uterine surfaces—peritoneal and mucous. This knowledge is of vital importance in the operative management of these cases, and I have elsewhere endeavoured to show how much of this knowledge we may hope to acquire by a minute and careful attention to clinical history, aided and supplemented by full and complete examination of the parts, with and without the use of the uterine sound, with and without the employment of chloroform. In cases of sessile fibroids, and still more in cases of interstitial or intramural fibroids, an examination under chloroform is in my judgment indispensable to the correct appreciation of the case, and to a thorough knowledge of the exact relations of the growth to the two uterine surfaces, without which knowledge no one has a right to subject the patient to the risks of an operation. I fully admit that in some few cases this perfect knowledge is not at present attainable. I am convinced, however, that very much more may yet be learnt by clinical history and physical examination than was thought possible some years back, and it is in this direction that we must look for further research and experience, if we are to treat with increased success these cases of interstitial uterine fibroids: we want minute and careful records of clinical histories, extending as they sometimes do over long series of years;

and we want exact particulars of post-mortem examinations, in regard more especially to the relations of these tumours to the mucous and peritoneal surfaces, but especially to the latter: for it need hardly be said that the turning out and removal of these growths from their uterine beds becomes very critical work when we approach near to the peritoneal surface.

It is not, however, my intention in this paper to discuss generally the best modes of treating cases of the kind we are considering. I have already, in another place, put before the profession my opinions on the subject. I may, however, state as the result of further experience in these cases, that I am more than ever convinced of the practicability of the operative measures there recommended. I am satisfied that a great many cases hitherto regarded as incurable can be treated surgically with perfect success, and with no greater risk than is fully warranted by the nature of the case. I am the more anxious to make this statement because I know that high authorities can be quoted in condemnation of this practice, though I believe that their opinions have been formed with sublime indifference to facts.

I said just now that increased experience had taught us what we cannot do as well as what we can. In the former category I think it is now pretty generally admitted that we must class the treatment of these uterine fibroids by means of drugs; that these growths do sometimes diminish in size during the administration of various medicaments is, I believe, as true as that the same result sometimes occurs when no such medication is being practised; both are equally rare, and, in my opinion, equally unexplained. That the medicines taken or applied in the former case have anything to do with the alleged result I do not for one moment believe; that some of the so-called absorbent medicines are capable of doing harm I am as fully assured, and the rule of practice which I have laid down for myself in regard to the medicinal treatment of these cases is this: that if I cannot feel a certainty of doing good, at least I will be sure of avoiding harm by abstaining from fussy and often irritating

medications, and by withholding medicines which by their cacoplastic tendencies are more likely to injure than to improve the general health.

The object which I have in view in writing this paper is to direct attention to, and adversely to criticise, a suggestion which was lately made in a highly instructive and interesting paper by Deputy Inspector-General Cameron, H. P., which appeared in the *Lancet* of August 22nd. The author was writing "on the dispersion of tumours by puncture," and certainly some of the cases he therein records are eminently suggestive and remarkable. In the course of his remarks he refers to an extraordinary case which occurred to him, and which in his opinion "*affords grounds for thinking that puncture might possibly be found to bring about the dispersion of such growths as fibrous tumours of the uterus,*" the italics are my own. Now, the case which, as he says, suggested this idea was one in which a small swelling about the size and shape of a dove's egg existed in the abdomen of an infant a few months old. All kinds of treatment failed to arrest or disperse the lump, which was felt plainly and easily and seemed to be situate in front of the upper edge of the quadratus lumborum muscle, half way from the spine ; it was smooth, moveable to some extent, and painless on pressure. As the swelling steadily but very slowly increased in size, and no medical treatment seemed of any avail, the author, at the urgent, not to say importunate request of the child's parents, consented to "do something" by operation, stating at the same time his belief that inflammation and death would almost certainly be the result. The operation which he performed is thus described :—"I steadied the tumour between my fingers spread out, and then pushed a lancet, held at right angles, deep into it. The feeling communicated to the hand was that of penetrating a dense glandular structure. No trace of matter appeared on the blade, no diminution of the tumour, nor any signs of internal hemorrhage." The upshot of the case was that no inflammation, fever, or bad symptom of any kind supervened, and "absorption having set in at once, the tumour, whatever it was, disappeared altogether in a very brief space."

Other cases are mentioned where a similarly successful issue has followed the same method of treatment ; as in cases of great enlargement of the liver, spleen, and other chronic glandular swellings which are met with so frequently in strumous subjects in hot climates. The case above described is thus summed up, " With this case and those where a like result followed on puncture of the liver borne in mind, I should be greatly disposed to try a similar treatment sooner than see a patient perish by hemorrhage consequent on fibrous uterine tumour."

Now, I think if the writer had had more clinical experience in cases of uterine fibroids, if he had examined some of them post-mortem, and had studied their structure and pathological relations, he would hesitate a little more before recommending or suggesting this procedure. The cases which he has had the courage to treat in the way proposed, and those last referred to have no sort of affinity to one another, they are totally distinct in every aspect, structurally and functionally, if I may so say, and the treatment which, as he shows, is so eminently successful in the one case, would I feel convinced not only utterly fail in the other, but I believe would be attended with no inconsiderable risk. The reason of the difference in the two cases is to be found, I think, in the inherent differences of the parts implicated. In the one case, there is nothing but glandular tissue to deal with, which may no doubt by the means suggested be made to take on rapid absorptive action ; in the other case you incise a highly vascular, sensitive, non-glandular organ, having strong pathological leanings, with marked proclivity to inflammatory action. Secretion and absorption are the special characteristics of the one, which may now be made available for curative purposes—exudation and inflammation are the leading tendencies of the other, which are very likely to be developed by the injury proposed to be inflicted.

This is the first objection that occurs to the method recommended by the author. Another objection may be urged against the ground put forward in justification of the operation, which is, that it is to be done " sooner than see a patient perish by hemorrhage consequent on fibrous uterine

tumour." Now, I make bold to say that no woman suffering from this disease ought to perish in the way described. I have before expressed the opinion that the two symptoms—hemorrhage and pain—which are the prominent symptoms of uterine fibroids, afford valuable indications in regard to the situation of these growths. Thus the more submucous a uterine fibroid is (that is, the more it encroaches upon the uterine cavity), the greater will be the hemorrhage: while, on the other hand, the more subserous it is (that is, the more it develops on the peritoneal aspect) the greater will be the pain.

The practical application of this rule is obvious—viz., that the former are, while the latter are not, amenable to surgical interference. So that, speaking of course more or less in general terms, a case which is characterized by excessive hemorrhage is a very hopeful one, because it comes under the category of those which may be cured by the operative procedures which I have elsewhere described. On the other hand, cases in which there is but little hemorrhage and a good deal of pain belong generally to the other class, the subperitoneal, and are not as a rule amenable to surgical treatment. Hence, the writer of the paper referred to may be saved the pain of seeing a patient perish by hemorrhage consequent on fibrous uterine tumour, if, instead of the method he proposed, and which I fear will more than disappoint his expectations, he will operate in the way described. At all events, I speak from the experience of some hundreds of these cases when I say that I never yet saw a patient die in the way described except on one occasion, and then I only saw her for the first time when she was *in articulo mortis*. The result of the post-mortem examination in that case clearly showed that had the condition been recognised earlier, the tumour might easily have been removed, for it was a large intra-uterine sessile growth, and the patient's life would in all human probability have been saved.

[Dr. Meadows has forwarded, too late for publication in this number, an appendix to his paper. It shall appear in our next.—ED. O. J.]

Reports of Hospital Practice.

CASES OF PLACENTA PRÆVIA.

Under the care of Dr. JOHN WILLIAMS, at University College Hospital.

[We are indebted for the following notes to Mr. Dyson and Mr. Gould, late Obstetric Assistants to University College Hospital.]

CASE I.—Mrs. S., mother of two children, menstruated last at the end of May, 1873. She noticed nothing unusual in the course of her pregnancy until Feb. 6, 1874, when, on getting out of bed in the morning, she observed a discharge of clotted blood from the vagina. On the mornings of February 10th and 12th similar hemorrhage was observed under similar circumstances; but the loss of blood on the last occasion was so great as to make her feel “quite ill.”

On 13th she came to the Hospital. She was very pale; her pulse was small and compressible. The os uteri was thick and cushiony; the placenta could be felt on the right side of the cervix, the edge of it reaching into, but not across the os uteri. The child presented the head in the first position. The fetal heart sounds were audible just below, and to the left of the umbilicus, and the placental souffle in the right groin. The woman was daily expecting to be confined. She was advised to go home, to rest in bed, and to send for the obstetric assistant on the recurrence of hemorrhage. The hemorrhage recurred on the morning of February 18th, and was brought on throughout the day by the slightest exertion. In the evening the child was found to occupy a transverse position; labour pains had come on, and each pain was accompanied by slight loss of blood. The head of the child was brought into the pelvis by external manipulation, a binder applied, and the patient placed on her back. The bleeding, however, continued; at first the loss was slight, but in a few hours it became considerable, and it was determined to turn the child and deliver. Version was performed by the bipolar method, and the child was

born without difficulty. When born the child did not breathe, but after artificial respiration had been practised for a short time, the natural function became established. The placenta was removed almost immediately, and the loss of blood which took place during the operation was but slight. A fortnight after her confinement the patient had an attack of phlebitis in both saphenous veins.

This did not appear to be due to the condition of the uterus, for no mischief of any kind could be discovered in the pelvis. In the course of a fortnight, however, the inflammation of the veins had disappeared, and the patient had quite recovered.

CASE II.—Mrs. Sh., mother of six children, being eight months pregnant, had a bleeding from the uterus in May, 1874. On examination it was found that the placenta was *prævia*. She was told to rest, and send to the hospital on the recurrence of the hemorrhage.

On June 11th bleeding came on at midnight; this was moderate in amount, and soon ceased. The cervix uteri was found high up, and not quite obliterated. No presenting part could be felt from the vagina, but a soft cushiony mass was felt in front and above the cervix.

When the finger was introduced into the uterus the head could be felt. The patient complained of frequent short pains in the back and abdomen; these continued through the night and the following day; but there took place no more hemorrhage, nor any dilatation of the os uteri.

The patient was ordered a draught, containing ℞xxx. of Tr. Opii, soon after taking which the pains ceased.

On June 14th the pains returned, and on examination it was found that the os uteri was dilated to the size of half-a-crown, and that the placenta, which was attached to the anterior wall of the uterus, had been partly detached, and that it projected into the uterine orifice. As the bleeding became considerable it was determined to dilate the cervix, turn, and deliver. The dilatation was accomplished by the hand, and the child turned by the combined internal and external method. No difficulty was met with until the body had

been born ; but the application of the forceps became necessary for the extraction of the head. The child was still-born ; artificial respiration was practised for a long time, but in vain. The uterus contracted well after delivery, and there was no post-partum loss of blood ; but during the operation of delivery the loss was not inconsiderable.

On the third day after delivery the patient had an attack of erythema of the face and eyelids, which in appearance simulated erysipelas. It was, however, not accompanied by signs of fever, and in two days it had quite disappeared.

On June 21st, a week after delivery, the patient was convalescent.

CASE III.—Mrs. C., mother of five children, had noticed nothing unusual in the course of her pregnancy. In her last confinement the child occupied a transverse position.

On the night of June 23rd, while in the act of stooping, she felt a sudden rush of blood from the vagina. It lasted a few minutes and then ceased. When examined the cervix was found unobliterated ; the placenta could be felt over the os uteri by the finger introduced into the cavity of the cervix. The lower segment of the uterus felt like a soft cushiony mass. The bleeding soon returned. The placenta was separated all round as far as the finger could reach (Dr. Barnes's method) ; in doing this the edge of the placenta could nowhere be felt. The hemorrhage stopped instantly and entirely after the separation was effected. The child occupied a transverse position. The patient had few pains during the night, but on the following morning pains came on more frequently. At 11 A.M. the os uteri was almost fully dilated, and nothing but placenta could be felt in it. At 1.30 P.M. the orifice was fully dilated, and the placenta and membranes projected through it into the vagina. Bleeding now took place with every pain, so the left hand was introduced through the membranes, a foot was seized and brought down, but the breach could not be made to pass the placenta ; an attempt was then made to push up the obstructing placenta, but this failed ; the other hand was introduced into the uterus, and the placenta was separated in its entire extent, and removed ;

the child was then extracted, the forceps being applied to the head. Artificial respiration was practised on the child for a few minutes, after which it breathed and cried well. The uterus contracted firmly, and no post-partum loss of blood took place. The loss of blood in this case was much less than in either of the other two cases, and the mother's recovery was better and more rapid.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

NOVEMBER, 1874.

OUR MEDICAL SOCIETIES.

AGAIN our Medical Societies are commencing their sessions, and the important objects for which they were founded are once more about to receive the attention of their members. The Medical Societies of Great Britain and Ireland may, without fear of contradiction, be stated to amount to one hundred in number. Half hold their meetings in the provincial towns of England and Wales, a quarter in London, and the remainder in Scotland and Ireland. The existence of this large number of societies bears witness to several significant facts, but principally to the wide prevalence of a strong medico-social instinct, which either in small knots or huge assemblies draws the members of our profession irresistibly together. The main objects of these fraternities are the promulgation of medical knowledge, the protection and promotion of professional interests, and the fostering of good fellowship. What ordinary Medical Schools are to students, Medical Societies are to qualified practitioners. The only difference is, that in the former there are many pupils, and but one professor ; whereas in the latter, each is lecturer and learner in turn. Every man who, in his practice, meets with a rare or instructive case, feels at once an urgent desire to relate it to his fellow-workers. It is a relief to his mind to tell the troubles he has passed through,

and the results of his anxious watchings, his successes and his failures, and the obscure points which he hopes his friends may be able to elucidate. Every fact he lays freely before them. If in error he submits to criticism ; and if, perchance, he can give a brother practitioner a valuable hint, he is repaid for his trouble and very well pleased. We have no trade secrets ; we do not register or patent our ideas, nor do we seek the "sole power to make, use, and vend" any discovery, however valuable it may prove to be to the public, or whatever chance there may be of its becoming pecuniarily advantageous to ourselves. Through the medium of Medical Societies, the fruits of our genius or labour are ungrudgingly distributed, and it is this free interchange and publication of valuable thought which enhances the usefulness, and ennobles the life of all Medical Associations. Without discussion, Societies would be aimless and stupid. It is always better to read a paper than to hear it more or less distinctly read. The debate upon it is what interests and draws men from their comfortable homes. It is the opportunity of hearing short practical abstracts of the opinions of those who know most about the subjects discussed, which bring men long distances at great inconvenience. We are certainly not prominently eloquent as a body, but any educated man who has ideas can, as a rule, at least express them intelligibly, if not rhetorically. Extempore speaking is, however, with a few an impossibility, and doubtless, in consequence, much valuable information is sometimes withheld. This fault, nevertheless, is not so damaging to a society or trying to its members, as the talent which others possess of uttering fluently and persistently wearisome commonplaces. Great tact is demanded of Presidents in dealing with these gentlemen. In fact, how much depends not only in this but in other matters upon the ability and discretion of officers ! Upon them mainly rests the responsibility of their Societies' prosperity. Many valuable medical meetings have become moribund, and died solely for want of skilful treatment. The desire amongst us to unite always exists, and he who by any act of commission or omission thwarts this wish, does great injury to the

progress of medical science. The assembly of medical men is also most useful for the purpose of enabling them to deal satisfactorily with subjects of ethical or political interest. But, perhaps, not the least advantage produced is the kindly feeling engendered. At these fraternal conclaves men meet, speak, and eat together, who might otherwise pass each other coldly, or regard one another with unfounded distrust. During the enthusiasm of debate or dessert, tongues become loosened which, owing to some misunderstanding, may have remained for months dumb. Under the genial warmth of good fellowship petty annoyances and grievances melt, mutual concessions are made, and many old feuds are ended. It is an obstinate spirit which neither charity nor good cheer can change. Amongst Christian gentlemen the one must always be present; the second should never be absent, even if it be only in the shape of a cup of tea. Success then to our Medical Societies, and may their present sessions be more harmonious and useful than ever.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, October 7th, 1874.

E. J. TILT, M.D., *President, in the Chair.*

THE following gentlemen were elected fellows of the Society:—William Clair, M.D. (Jedburgh); W. A. FitzRaine, L.S.A.; E. L. Kock, M.D. (Ceylon); James Loutitt, M.D. (Greenwich); W. H. Roots, M.R.C.S. (Kingston); and A. R. Ticehurst, M.R.C.S. (St. Leonard's).

Dr. TILT exhibited some braces introduced by an American firm into this country under the name of *Ladies' Garment Suspender*. They consisted of elastic webbing, similar in construction to the ordinary braces, but having hooks attached to the extremities, so that the skirts could be readily fastened on to the braces. They were of great service in many cases where the pressure of the clothes on the lower part of the abdomen produced much inconvenience. They were very simple in construction, and well adapted for the purpose for which they were designed.

Dr. POTTER and Dr. J. C. HAYES reported that the specimen exhibited by Dr. Daly at a former meeting consisted of an interstitial fibroid tumour embedded in the uterine tissue of the body and fundus. From the posterior wall of the cervix, extending from the external to a little beyond the internal os, a ragged, soft, and very lacerable growth was seen to be sprouting. Nearly the whole of the anterior wall of the cervix had been destroyed by ulceration. The vagina was quite free from disease. The left ovary was enlarged to the size of a hen's egg.

The microscopical appearances of the growth in the cervix were those of medullary cancer, undergoing rapid fatty degeneration. The uterine fibres lying nearest the mucous membrane were packed with small round cells, whereas the fibres on the posterior surface of the neck were healthy. The cancer seemed to have originated in the mucous membrane of the neck.

Dr. DAYLEY remarked that the case afforded an important hint for treatment; any operative procedure would probably have been attended by a fatal result.

Dr. HAYES thought any operation would have been impossible. Had the uterus been dilated the tumour would not have sloughed out. He regretted there had not been a fuller report of the post-mortem; the urgent vomiting seemed to point to cancer elsewhere.

Dr. MEADOWS inquired how near the tumour was situated in reference to the peritoneal surface.

Dr. HAYES replied, within a quarter of an inch, and that the tumour was the size of a small apple.

Dr. ROGERS thought the fact of the patient losing blood, and a fibroid tumour being diagnosed, there was no harm in proposing dilatation or incision. He himself had frequently applied bromine internally and destroyed malignant growths. He considered Dr. Wynn Williams perfectly justified in proposing an operation.

Dr. HAYES alluded to a case where the neck was removed, but the remainder of the cervix was infiltrated with malignant cells.

Dr. WYNN WILLIAMS stated that he had seen the patient during life, and had proposed that if the patient rallied from the effects of the hemorrhage, he would see what could be done by dilatation in arriving at a more precise diagnosis, and proceed to operation if deemed advisable.

Dr. JOHN WILLIAMS read a paper "On the Relation between Congestion of the Uterus and Flexion of the Organ."

Different, and even opposing views, are held upon this subject.

1. It is held on the one hand that congestion is the primary morbid condition of the uterus, and that flexion follows as its consequence.
2. On the other hand it is maintained that flexion is the primary morbid state, and that congestion is brought about by it.

A third view may be adopted—viz., that the two conditions bear

no relation of cause and effect to one another, though they frequently co-exist in the same organ. After discussing at some length, in a very able and exhaustive paper, the various opinions, the Author thus summarizes his conclusions:—"There is no evidence to show that a physiologically increased flow of blood through the uterus occurring periodically, or that erections of the uterus favour or cause chronic congestion of the organ. Exposure to cold during a menstrual period is not a common cause of congestion of the uterus. Simple congestion is a rare affection of the virgin uterus. Flexion, or flexion accompanied by congestion, is not an uncommon affection of the organ in its virgin state. The effects of congestion on the uterus are at first slight enlargement through distension of its vessels, then slight softening from exudation into its tissue, and lastly, enlargement of the organ and induration of its tissue. The increase in weight of the body of the virgin uterus arising directly from congestion is probably equal to about the weight of two drachms of blood. The effects of congestion on the uterus are such that it is not possible for such a small force as the weight of two drachms of blood to produce flexion of the organ. The condition of the uterus from the time of impregnation to the fourth month of gestation militates strongly against the view that congestion is a cause of flexion. The effects of flexion on the uterus are occlusion of its canal, leading to dilatation of its cavity and congestion and thickening of its walls, just as obstruction to the exit of material from all hollow muscular organs causes dilatation and hypertrophy of those organs. The increased flow of blood through the flexed uterus just before menstruation does not diminish but increase the flexion. Simple flexion of the uterus gives rise to congestion and hypertrophy of the cervix by compressing the venous plexus around the insertion of the vagina into the uterus. In retroflexion, the body of the uterus and the veins of the broad ligament may be grasped by the sacro-uterine ligaments, and thus become greatly congested."

Dr. TILT thought the Author had well explained the mechanism of uterine congestion by flexion of the womb; but he maintained that something more than flexion, some diseased condition of the uterine tissues was required to account for uterine congestion and its frequent consequences, otherwise it would not so frequently occur that the case of the uterine disease permitted patients to take an active part in all social duties, although the womb remained considerably retroflected. Dr. Tilt still believed with Roget that normal menstruation congested the womb, and he stated that many cases had been recorded in which the whole structure of a menstruating uterus had been found gorged with blood as in Dr. Hayes's case. Dr. Tilt argued that in many cases of uterine disease, menstrual molimen was seldom absent, that there ensues a considerable amount of permanent softening of the body of the womb, while the cervix retains its usual firm consistency. Under such circumstances it is easy to understand that some internal pressure should bend the overweighted body of the womb on its neck, and he argued that the frequent disappearance of marked

uterine flexion after the cure of uterine congestion and ulceration, by leeches, cooling injections and caustic treatment, showed these morbid conditions to have been the real cause of the flexion. Dr. Tilt considered that nothing could be more dangerous to sound practice than to attach too much importance to flexion of the uterus as a factor of disease ; that to accept it as the common cause of uterine congestion was actually to make it the keystone of uterine pathology ; and that the inevitable result would be the general resort to pessaries, in the earliest stages of uterine affections and to their almost necessary aggravation thereby ; and he concluded by strongly urging that whatever else was amiss about the womb beside its plane of flexion, should be cured by preliminary treatment before resorting to mechanical measures.

Dr. BARNES thought the paper was an able analysis of the doctrines held on this point. He must demur to the statement that the profession was divided into two camps, in one the flexion, and in the other congestion preceding, there may be a third admitting that both may be right, the tendency was to receive one idea and to be satisfied by it, the mind not being able to receive both. Truth was never antagonistic. As to inflammatory conditions leading to flexions, no doubt they arose after labour from enlargement and subinvolution, and flexion or version ensued. He did not see why congestion should not cause it, but as to flexion preceding congestion the former exists in the original state before any physiological changes have taken place in the uterus ; the flexion may favour congestion it is true, but we see numerous cases of dysmenorrhea where we cannot fairly put it down to one or the other condition, the congestion being often due to constriction of the lower part of the cervix. Dr. Williams had not gone on with his argument. There was an old theory in medicine that treatment sometimes proved pathology, and is the test of it. When we apply treatment to relieve the secondary enlargement and inflammation, we also find the flexion or version relieved. It is not a question of a scientific mode of reasoning, but confirming theory by practice. The paper was a clear and well reasoned-out statement of this matter.

Dr. BANTOCK thought there was one point that had been missed—the effect of cold in repressing the catamenia. He had seen numerous cases where serious consequences had ensued from this cause. In one instance a young lady, being perfectly ignorant of the subject, took a cold bath on the appearance of the first catamenia and checked the flow for twelvemonths, headache, nervousness, and other symptoms ensuing ; profuse menstruation then occurred, followed by such scanty discharge as scarcely to justify the name of catamenia. Excessive tenderness and enlargement of the uterus pointing out clearly the effect of cold in inducing inflammation.

Dr. BRAXTON HICKS though agreeing with Dr. Williams, had seen congestion as a product of flexion—there was still another factor to be remembered—flexion persisting and congestion then occurring,

this latter was kept up by the flexion. Flexion itself was common, and yet there were no symptoms ; therefore we could not look upon flexion as producing any congestion, but where flexion existed and congestion occurred, then we got all the symptoms described. Congestion was relieved entirely by replacing and supporting the uterus.

Dr. PLAYFAIR thought no one could doubt the value of the paper. The question at issue often led to errors of practice and injury by treatment. He did not quite agree with Dr. Williams. We meet with cases where congestion exists, but it is impossible to treat the flexion ; but by relieving the congestion (by leeching, &c.), the flexion disappears. He agreed with Dr. Williams that in the vast majority of cases pessaries were necessary. The observations of Dr. Braxton Hicks were of great importance ; flexion exists though not often seen, as no symptoms declare it, but in cases of sterility patients present themselves to know why they do not conceive, flexion being present, and yet no inconvenience whatever being complained of. There were numbers going about who never apply for treatment. As regards mechanical treatment, he thought more highly of it than formerly, since perusing Dr. Graily Hewitt's work, and it was likely to lead to beneficial results. It was true the introduction of the uterine sound often produced inflammatory mischief if used incautiously.

Dr. BRAXTON HICKS remarked that the employment of the uterine sound for redressing the retroflexed uterus was unnecessary, the postural treatment and the pessary being all that was necessary.

Dr. WYNN WILLIAMS alluded to a case where all her troubles dated from a fall ; there was no ante flexion until the fall which set up inflammation and contraction of one side ensued producing flexion. Some authors assert that every unimpregnated uterus is ante flexed, some portion of the catamenia becomes retained which excites inflammation, and the flexion is increased. Flexion may precede congestion and cause it, in other cases the congestion causes the flexion. He had grave doubts if any severe flexion could be removed by treatment. Give the uterus rest, and congestion and inflammation would subside.

Dr. GERVIS remarked that his experience coincided with Dr. Playfair's. He met frequently with cases where flexion and congestion existed together. The latter was relieved by nitrate of silver, &c., applied to the interior of the uterus, and the version passed away without the employment of a pessary at all. In cases of sterility, it was not at all unfrequent to find the catamenia regular and no uterine disturbance whatever, and yet flexion existed.

Dr. WILLIAMS stated that he did not allude to versions, only flexions.

Dr. HAYES observed that there were many points discussed by Dr. Williams, some of which were open to question. He stated that in case of menstruation the whole uterine organ did not undergo

congestion. In the said period congestion occurred when the mucous membrane was being formed. In a case recently noticed the ovaries and ligaments were engorged with blood, as also the body of the uterus; the mucous membrane was reddish and disintegrating, a small clot being present in the upper part of the uterus. It was a question whether the menstrual nixus caused a sufficient congestion to lead to flexion. It often happened that a patient had a larger discharge than usual at the menstrual period, was suddenly seized with violent pain, which passed off. At the next period the pain returned, and on examination the uterus would be found to be enlarged and partially fixed. This would be ascribed to hematocele, but it might be pelvic cellulitis. In cases of prolapsus with retroflexion, we get hypertrophy of the neck and elongation, due according to Dr. Barnes to bruising during labour. If on examining a patient we find flexion where no symptoms are present, why should we interfere or tell the patient?

Dr. WILLIAMS, in reply, stated that when the uterus was enlarged after labour, the fundus projected out of the pelvic into the abdominal cavity. The force of the diaphragm acting on the posterior surface produced ante flexion, or retroflexion might be produced by slight exertion, such as getting out of bed; the fundus was driven by the action of the abdominal muscles under the sacral promontory, and the organ on account of its size became fixed in that position, permanent retroflexion being the consequence.

He did not dispute the fact that exposure to cold during the menstrual flow caused congestion of the uterus, but according to his experience it was not of common occurrence; that there was a third factor between flexion and congestion he had no doubt. In cases of retroflexion that factor is the constriction caused by the retro-uterine ligaments. In other cases it is the constriction of the uterine canal at the point of flexion.

The menstruating uterus referred to by Dr. Hayes was, he believed, taken from the body of a woman who died of "acute blood poisoning," and cannot be taken as the condition usually present.

The object of the paper was to show the relation that may exist between the two conditions, not to prove that flexion was the only cause of congestion. The uterus that remains enlarged after labour is not merely congested but hypertrophied, involution not being properly completed. In considering the relation between congestion and flexion, we should study the subject in the virgin uterus where simple congestion is never met with.

A Case of Ileo-cecal Intussusception in an Infant of Eight Months.

Dr. MADGE related the particulars of a case where much straining, with the passage of pure blood per rectum, led to the supposition that intussusception had taken place. Death occurred suddenly, and on a post-mortem examination, a portion of the ileum, with a great deal of the large intestine, was found to be completely invaginated in

the remaining portion of the canal. The supposed cause of the mischief was an excessive amount of tossing and romping to which the child had been subjected.

Dr. PLAYFAIR inquired if the presence of a distinct tumour or swelling at the point of invagination had been detected, a bold and early operation of gastrotomy might have saved the life of the patient. He referred to a case in which there was a distinct loss of blood per anum. Gastrotomy was proposed, but one or two eminent surgeons declined to sanction the operation. The tumour increased, and the patient died. Had an operation been performed at first, the invagination might, no doubt, have been removed. It was one of those points in which practical surgery led to happy results.

He had tried inflation successfully in one case, in which the patient died three months after from a second attack, and the correctness of the opinion was confirmed post-mortem.

Dr. BRUNTON had seen several cases in which the tumour was very manifest, a knot of bowel being detected in the neighbourhood of the umbilicus. Injection of air and also water had been tried unsuccessfully. Opium in drop doses often proved of great service.

Dr. HAYES agreed with Dr. Playfair in the advantage of an operation. In the case of an infant seven months old inflation was unsuccessful. The child died, and on a post-mortem examination no adhesions were found. Had an operation been performed, it would probably have been successful.

Dr. GERVIS inquired if the application of ice had been tried. He cited one case where this was done. The tumour disappeared, and the child recovered.

Dr. RASCH alluded to the case of one of the watchmen at Vienna, having passed several feet of intestine per anum, and yet recovered.

Dr. WYNN WILLIAMS referred to several cases published in the *Medico-Chirurgical Transactions*.

MEDICAL SOCIETY OF LONDON.

Observations on Still-born and New-born Infants.

By ROBERT BOYD, M.D., F.R.C.P., &c.

The registration of still-born children having at the present time very properly become a subject of public attention, I have contributed some facts relating to such cases that came under my notice formerly, when Resident Physician at the St. Marylebone Infirmary, and which may interest some of the Fellows of the Medical Society.

In the first volume of the *Provincial Medical and Surgical Journal* I published an account of nineteen cases of still-born and new-born children, examined within twelve months; from these cases I was led to the following inferences:—

1st. That intra-uterine disease was not an uncommon cause of abortion, and that weakly children may be born of apparently healthy mothers, six of such children having died within twelve days after birth.

2nd. That from the great difference found in fifteen instances in the relative weight of the lungs to the body, there were insuperable objections to Ploucquet's test.

There were three inquests in these nineteen cases referred to, and the Coroner, Mr. Wakley, mentioned having held an inquest on an infant, some days old, the weight of whose body was considerably under 3 lbs.

Upon the comparative density of the lungs the Ploucquet and the hydrostatic tests have been founded; the latter is of the very first importance. M. Ploucquet stated that in still-born children the weight of the lungs is one-seventieth of the weight of the whole body; whilst in the children who have breathed, it amounts to one thirty-fifth. From which he inferred that the blood introduced into the lungs in consequence of respiration doubles their actual weight.

M. Ploucquet, like some others of our profession, was tempted to draw general conclusions from too limited experiences, and it is only surprising that his test should ever have obtained the repute it had.

The relative weight of the lungs to the body is shown in the abstract here given of the weight of the body and internal organs, in 221 still-born and new-born infants, taken from my tables.

The preponderance of males is remarkable. It appears that in 131 post-mortem examinations of still-born children, 79 were males and 52 females; whilst in 90 new-born infants, the numbers were equal, 45 of each sex.

The weight of the body in 48 premature still-born varied very considerably; in 28 males the minimum was 12, and in 20 females, 8½ ounces; the maximum weight being 85 ounces in males, and 75 in females; the average weight of the body was 40½ ounces in males, and 38 ounces in females.

The average weight of the body in 83 still-born infants at the full period, in 51 males, was 105¼ oz. (6 lbs. 9¼ oz.); the maximum 172 oz. (10 lbs. 12 oz.), and the minimum 60 oz. (3 lbs. 12 oz.); in 32 females the average was 98½ oz. (6 lbs. 2½ oz.), the maximum 154 (9 lbs. 10 oz.), and minimum 67 oz. (4 lbs. 3 oz.).

The length of the body varied in the premature still-born from 10 to 18 inches; the average length in the males 14, and in the females 13½ inches; in the still-born at the full period the average length was 19 inches.

The weight of the brain in the premature males varied from 1·3 to 9·2, and in the females from 1·2 to 9·1; the average weight in the males was 5·6, and in the females 4·6 ounces. In the males still-born, at the full period, the brain varied in weight from 9·3 the

minimum to 22 ounces the maximum; and in the females from 8 to 15·1 ounces; the average weight being in the males 13·8, and in the female 12·2 ounces.

Abdominal Organs: Liver dark-coloured; gall bladder semi-transparent; stomach filled with yellowish glairy matter. Bladder full of urine; organs of generation distinct; clitoris large and more developed than external labia. Intestines well developed; the smaller containing greenish meconium, the larger as low as rectum, darker coloured.

Thoracic Organs.—The right lung was about a fourth heavier than the left; the average weight in the premature males of both lungs was 1 ounce, and in females ·9, or one-tenth less. The average weight of the heart was $\frac{1}{4}$ of an ounce in the females, and one-tenth more in the premature males. In the males at full period the average weight of the heart was nearly $\frac{3}{4}$ of an ounce, and one-tenth less in the females. Thymus large in 1, and pale in 1. In infants still-born, full period, the average weight of the lungs in males and females alike was 1·8 ounces; the average weight of the lungs to that of the body, one fifty-seventh in males, and one fifty-third in females.*

In the new-born infants that had breathed, the average length of the body was 21 inches; the average weight 81 oz. (5 lbs. 1 oz.) in males, and 67 $\frac{3}{4}$ oz. (4 lbs. 3 $\frac{3}{4}$ oz.) in females, being very much less than the average weight of still-born infants at the full period, the difference being 1 $\frac{1}{2}$ lbs. in males and 2 lbs. in females. The maximum weight of the body was in new-born infants 8 $\frac{3}{4}$ lbs., being 2 lbs. less than the maximum weight of the body of still-born infants at the full period. It is only a matter of surprise when an infant weighing 10 $\frac{3}{4}$ lbs. and with a brain of 22 ounces in weight is brought alive into the world. Extravasation of blood is frequently found on the brains of still-born children, and meningeal apoplexy in those who die shortly after birth.

The average weight of the brain in new-born males was 11·6, and in females 10 ounces. The average weight of the lungs compared to the weight of the body was one forty-fifth in males, and one thirty-fifth in females.

The difference in the average weight of the body and organs in the male and female, even at this early age, is remarkable; and not less so the fact that the average weight of the infants of 131 married women was found to be 7 lbs. 2 oz., whilst those of 209 single women was 6 lbs. 10 oz., born in the lying-in ward, St. Marylebone Infirmary.

From notes of cases of thirty-two immature infants examined, it appears that one female was encephalotous. Those who were present at its birth said it resembled a monkey. The eyes were prominent,

* In a female about fifth month: brain only seven drachms in weight. In the chest, lungs pale, red, solid; sank in water; lobes distinct; 3 of right, 2 of left, each $\frac{1}{4}$ oz.; heart pale; also the thymus.

the eyebrows on the crown, the skull quite flat and open behind, a soft mass covered by a thin membrane in the form and place of the cerebellum; when opened it was more like coagulated blood and fibrine. The occipital bone was deficient, except the basilar process, the frontal, temporal, and parietal resting on base of skull, and lined by a serous membrane without anything else intervening. There was a white line which appeared to be the optic nerve from back of orbit, but was found to be bone. The cervical vertebra curved forward, forming a cavity in which was the mass corresponding to the cerebellum. The spinal cord bifurcated at the lower part, upper part natural. Lungs sank in water. Abdominal viscera natural.

In the smaller infants there was evidence of death having taken place in utero; one was semi-putrid, more or less abrasion of the cuticle; the tissues and organs of one dark-red colour in several places; in two bleached and soft; the umbilical cord edematous; brain pulpy; and in the smallest the arachnoid red and convolutions indistinct; about 2 ounces of blood on the brain of one male; 8th to 9th month of utero-gestation.

There were 15 cases of abortion, 11 of them from the lying-in ward; three of them were twins—in one both were males, in one both females, and in one male and female; the length and weight of the body and of the principal organs are shown in the abstract. The average length of the body was $11\frac{3}{4}$ inches in males, and $11\frac{1}{2}$ in females. The average weight of the body was $20\frac{3}{4}$ ounces in males, and $18\frac{1}{2}$ in females. The average weight of the brain was $2\frac{3}{4}$ ounces in males, and $2\frac{1}{8}$ in females. Of the lungs, $3\frac{3}{4}$ drachms in males, and $2\frac{3}{4}$ in females. Of the heart, nearly 4 scruples in males; and $2\frac{1}{4}$ in females. Of the thymus, 21 grains in males; and 13 grains in females. Of the liver, 9 drachms in males; and 7 in females. Of the kidneys, 4 scruples in males; and $3\frac{1}{2}$ in females. Of the renal capsules, 33 grains in males; and 25 in females.

It may be observed that in the first of the illustrative cases there was a quantity of fluid in the chest, and that the mother too was diseased; and that in the 4th case blood was found effused in the scalp and in the peritoneum—nothing known of the case; in the 7th case, blood was effused in the cerebral ventricles; in cases 5, 9, 12, and 13, the brain was pulpy and epidermis abraded from incipient decay, the tissues and organs all of a dark-red colour, the body more or less flattened, the ribs and cranial bones loose.

Seven other cases were found illustrative of intra-uterine disease as the cause of death, which may be added to those in the abstract.

CASE 16.—A male, about the 6th month; weight of the body, 32 oz.; decomposition had commenced in utero; about 1 oz. of fluid in the pleura.

CASE 17.—A male, about the seventh month; weight, 56 oz. (mother had gonorrhea the last three months). About 3 oz. of fluid in the pleura, some also in the peritoneum, which was opaque,

thickened, the intestines adhering together and to the abdominal parietes ; the capsule of spleen was also opaque and thickened.

CASE 18.—Male, still-born ; weight 111 oz. Some thick purulent matter oozed from the left bronchial tube, the bronchial lining membrane red, the lung sank in water, a small quantity of air at the margin of the right lung barely sufficient to suspend it in water above the bottom of the vessel.

CASE 19.—A female, still-born ; weight, 61 oz. Putrefaction had commenced ; between 2 and 3 ounces of fluid in pleura.

CASE 20.—Female, still-born ; weight, 112 oz. Pericardium covered by thymus, which weighed $\frac{1}{2}$ oz. ; some fluid in pericardium ; lungs sank in water ; relative weight of lungs to body, 1 to $89\frac{3}{4}$.

CASE 21.—Fetus. Both ureters enormously dilated, appeared like distended large intestines, occupying front and lower portion of abdomen ; kidneys atrophied, and destitute of lobular appearance usual in fetal state ; bladder much distended with urine ; no obstruction whatever in the urethra.

CASE 22.—Fetus, about eight months of utero-gestation. Kidneys were somewhat larger than usual, and converted into a mass of serous cysts, varying from a very minute size to that of a horse-bean. The fluid which they contained was of a brownish straw colour, and was, as usual, albuminous.

CASE 23.—Male, still-born ; weight, 106 oz. Small spots of ecchymosis over the surface of both lungs, not dilated, weight 2 oz.

We may infer that intra-uterine disease is not an unfrequent cause of abortion from the foregoing cases, in which disease was found in each of the three great cavities—blood effused in the brain, fluid in the pleura and pericardium, cysts in the kidneys, and peritonitis. The registration of such cases as here described, stating the cause of death when ascertained, would be very desirable.

CASE 24.—Male, newly born ; weight, 92 ounces. Lungs floated in water, $1\frac{1}{2}$ oz. ; relative weight to body as 1 to $61\frac{1}{2}$.

CASE 25.—Female, newly born ; weight, $74\frac{1}{2}$ oz. Lungs fully dilated, weight 2 oz. ; relative weight to body, 1 to $36\frac{1}{2}$.

CASE 26.—Female, aged 4 days ; weight, 81 oz. Malformation, imperforate anus. Lungs fully dilated, $1\frac{1}{4}$ oz. ; relative weight of lungs to body as 1 to $64\frac{1}{2}$.

CASE 27.—Female, aged 10 days ; weight, $50\frac{1}{2}$ oz. Lungs, $1\frac{1}{2}$ oz. The posterior portion not dilated ; the tissues yellow, jaundice ; relative weight of lungs to body as 1 to $33\frac{3}{4}$.

CASE 28.—Female, aged 10 days ; weight, 54 oz. ; lungs, $1\frac{1}{2}$ oz. The lower portion of the left lung not dilated ; relative weight of lungs to body as 1 to 36.

CASE 29.—Female, aged 12 days ; weight, 56 oz. Extremely weak, unable to draw the breast. Lungs not fully dilated, the lower lobes sank in water ; weight, $1\frac{1}{2}$ oz. ; relative weight of lungs to body as 1 to 37.

In 25 other cases of new-born infants, 14 males and 11 females,

who survived birth from 2 hours to 10 days, the average length of the body in the males was 17, and in the females $15\frac{1}{2}$ inches; and the weight in the males nearly $4\frac{1}{2}$ lbs., and 4 lbs. in the females. The average weight of the lungs in males and females, $1\frac{1}{2}$ oz.; and of the heart, 4 drachms in males, and 3 in females. Craniotomy was performed on 3 males: two were unusually large children; and in one case the mother had rickets, and was deformed. In one of these cases of craniotomy the lungs contained sufficient air to float them in water; in both the others the lungs sank in water.

In a medico-legal point of view the following 28 cases of infants on whom inquests were held are of practical interest. 15 were males and 13 females. Of these 3 males and 2 females were premature still-born; 10 males and 10 females were new-born; and 2 males had lived, 1 for about 3 weeks, and the other for 3 months; it was found dead in bed beside its mother, apparently from the pressure of a very large thymus body; one female lived for 2 days.

Most of these cases were brought to the infirmary by the police, by whom they had been found exposed either in the Regent's Park, the churchyard, or some other locality in the neighbourhood. A few were found where they had been concealed by the mothers.

MALES.

CASE 30.—Premature. The body brought in in a semi-putrid state. The right lung sank in water, the left floated from putrefaction; when the air was squeezed out, it sank. The navel-string was $11\frac{1}{4}$ inches long, and seemed to have been torn.

CASE 31.—Premature. The mother concealed the birth, the child was found in a closet. *Head*: Brain natural; weight, $12\frac{5}{8}$ oz. *Chest*: Both lungs sank in water; foramen ovale open. *Abdomen*: Organs normal. The placenta was attached to the child. No marks of violence on body.

CASE 32.—New-born. No mark of violence on the body. *Head*: The surface of arachnoid coated with blood. About three ounces of fluid blood in base of skull when the brain was taken out. The encephalon weighed 14 oz. The conjunctiva injected; the vessels loaded up to the edge of cornea. *Chest*: Both lungs partly distended with air, portions cut off and beaten gently on a stone with a hammer, still floated. Each lung weighed $\frac{3}{4}$ oz. Foramen ovale open. Thymus large, $\frac{5}{8}$ oz., nearly covered the pericardium. *Abdomen*: Organs natural. The navel-string, $1\frac{1}{2}$ inches long, had been cut; blood on the legs.

CASE 33.—New-born. Found in a box among clothes. No mark of violence on body. The umbilical cord was bifurcated, but one end attached to the placenta; the other end not adherent to it, but rounded off; the cord was not cut. *Head*: Brain rather congested; weight, $15\frac{1}{8}$ oz. The conjunctiva natural. *Chest*: The lungs floated easily in water, and supported the heart between them; they also floated separately, the right the lightest, but the heart sank. Each

lung weighed $\frac{3}{4}$ oz. The thymus large, $\frac{3}{8}$ oz.; contained its whitish fluid. *Abdomen*: Organs and parts natural. A little white matter and glairy mucus in the stomach. The tip of tongue was against the palate, almost closing the entrance; air readily passed down the nostrils from a blow-pipe.

CASE 34.—New-born. The body had been several days in water, and from this cause the belly was much swollen. *Head*: Brain very soft. *Chest*: Lungs healthy, and distended with air. *Abdomen*: Parietes green; parts natural; no food in stomach.

CASE 35.—Newly-born. Found dead in a water-closet. *Head*: Brain rather congested; weight, $14\frac{1}{2}$ oz. *Chest*: The lungs floated in water; the right weighed $1\frac{1}{4}$, the left 1 oz.; both had been fully dilated. *Abdomen*: Organs natural.

CASE 36.—Newly-born; found dead in a passage; weight, $102\frac{1}{2}$ oz.; length, 19 inches. *Head*: Brain natural; weight, $14\frac{5}{8}$ oz. *Chest*: Both lungs floated; the right weighed $1\frac{1}{2}$, the left $1\frac{1}{4}$ oz.; thymus large, 148 grains. *Abdomen*: The stomach contained only mucous matter. The left kidney contained two small cysts at its lower end; they were filled with clear fluid; one was divided by a membrane; a portion of the substance of the kidney was absorbed: the intestines were natural, and contained meconium; the navel-string had been cut; it was bloody at end, not tied; length, $2\frac{1}{2}$ inches.

CASE 37.—Newly-born; found dead in the street; no mark of violence on the body; the navel-string, 12 inches long, had not been cut, but seemed to have been detached from the placenta. *Head*: Brain congested, weight $16\frac{1}{2}$ oz.; the spinal cord natural. *Chest*: The thymus very large, $\frac{5}{8}$ oz.; it nearly quite concealed the pericardium: both lungs fully distended with air—the right weighed $1\frac{1}{4}$, the left $1\frac{1}{8}$ oz. *Abdomen*: Organs natural; meconium in the intestines.

CASE 38.—Newly-born; found dead; the cord about four inches long, not tied. *Head*: Double the natural size; the eyes separated to a great extent; palate cleft; fluid beneath the scalp, also in the ventricles, which were soft; a clot of blood weighing two ounces in the brain; weight of cerebrum 14 oz.; the cerebellum and medulla so soft that they could not be weighed. *Chest*: Both lungs were fully inflated; organs natural. *Abdomen*: Organs natural.

CASE 39.—Newly-born; found dead; the funis had been torn or cut close to navel, and the vessels were open. *Head*: A large quantity of blood in the brain; some extravasation in membranes at the base; weight of encephalon, $14\frac{3}{4}$ oz. *Chest*: The thymus very large; it extended on the anterior portion of both lungs and the pericardium, it weighed 1 oz.; both lungs floated, and contained a good quantity of air; both the foramen ovale and ductus arteriosus patent. *Abdomen*: Organs natural; the stomach contained no food.

CASE 40.—Newly-born. The mother, a servant, nearly come to the full time, was seized with pains like colic. Her mistress gave her a

glass of brandy: whilst taking it she felt a strong desire to go to the water-closet, where the child was expelled from her; the infant lived for twenty-four hours. The mother had no object in destroying the child, as the father of it was prepared to marry her. The right humerus was fractured. *Head*: A blue mark on forehead and left cheek, and swelling of the scalp behind; blood effused in scalp; the left parietal bone slightly fractured; about two ounces of blood on surface of brain and base of skull; blood also in spinal canal; the brain natural. *Chest*: The lungs fully distended; organs natural. *Abdomen*: The stomach contained gruel; the organs natural; meconium in the large intestines. The injuries received were probably caused by a woman suddenly snatching the child and throwing it on the seat of the closet.

CASE 41.—Examined on requisition from coroner; body found in the enclosure, Dorset Square; part of it green, from incipient putrefaction; the body seemed as if it had been pressed. *Head*: A dark coloured mark, the size of a penny piece, over the left eyebrow; dry skin adhering to skull; pericranium dark-coloured from effused blood, as if from pressure; a smaller and darker-coloured mark, the size of a shilling, over the right eyebrow; the brain pulpy, not congested, weight $14\frac{1}{4}$ oz. *Chest*: Sufficient air in lungs to cause them to float deeply in the water; the lower lobe of right lung floated, but the upper lobe, when detached, sank; the air in lower lobe, right lung, appeared near the surface, as it did also in the left lung, probably the result of putrefaction; a quantity, 2 to 3 drachms, of red fluid in the chest; the right lung weighed $1\frac{3}{4}$, the left $1\frac{1}{4}$ oz. *Abdomen*: Organs red and dark-coloured; some fluid also in abdomen; meconium in large intestines.

CASE 42.—Newly-born; found dead, in a pot under the kitchen dresser; the mother brought by the police to the infirmary; taken up for concealing the birth. Her account was that whilst she was in the pains of labour, the bell rang, and caused by its alarm the sudden expulsion of the child on the kitchen floor. She answered the bell, and when she returned found the child lying on its face dead; she then hid it in a pot, where it was found. The navel-string was $10\frac{1}{2}$ inches long, and had the appearance of being torn, not tied; no blood at the extremity; the body measured 20 inches, and weighed 6 lbs. 6 oz.; there were two small dark spots on the forehead; the left side of the face, on which it was found lying, flattened and covered with some dust; no marks on the body. *Head*: A slight effusion of blood on right temple; the cerebral vessels turgid with blood; weight $10\frac{1}{2}$ oz. *Chest*: The lungs quite buoyant, the left rather paler than the right; their weight $1\frac{1}{4}$ oz.; relative weight to the body as 1 to $81\frac{3}{4}$; heart $\frac{3}{4}$ oz.; foramen ovale and ductus arteriosus open; thymus body, $\frac{1}{4}$ oz.; bronchial tubes, trachea, and esophagus in a natural state. *Abdomen*: Stomach contained some glairy viscid fluid, weight $\frac{1}{4}$ oz.; small intestines natural; the large filled with dark meconium; weight $4\frac{1}{2}$ oz.; spleen, $\frac{1}{4}$; kidney, lobulated, $\frac{1}{2}$ oz.; renal capsules $\frac{1}{4}$, internally dark

and pulpy; the bladder contained urine; the testicles in scrotum. The mother tried and found guilty of concealing the birth.

CASE 42.—A new-born, headless infant, in a state of incipient putrefaction, the body and limbs nearly covered with dried mud and dirt; brought by the police to the infirmary. The spine was cut between the last cervical and first dorsal vertebra; the headless body measured $15\frac{1}{4}$ inches and weighed 67 ounces; the umbilical cord was 18 inches long, having three roots at the attachment to the placenta. *Chest*: A portion of the left lung and pericardium exposed by the incision; the lungs barely floated, and when cut into small portions continued to float, with the exception of a part of the upper lobe of the right, weight $1\frac{1}{2}$ oz.; thymus large, 3 drachms; heart $\frac{1}{2}$ oz.; foramen ovale open; ductus arteriosus and umbilical vein pervious. *Abdomen*: No food in stomach; liver, $2\frac{3}{4}$ oz.; kidney, $\frac{1}{2}$ oz.; capsules, $\frac{1}{2}$; testes below the ring.

CASE 43.—A still-born, found exposed, dead, in St. John's Wood. Navel-string cut, 15 inches long; some dried blood on the head, chest, and arms; the left thigh and leg swollen, and of a dark colour; the left foot turned in; length of the body 20 inches; weight, $8\frac{3}{4}$ lbs. *Head*: Blood effused on the surface of brain, $14\frac{3}{4}$ oz. *Chest*: The lungs sank in water, the right weighed 9 drachms, the left 8 drachms; thymus large, $3\frac{1}{2}$ drachms; heart, 2 drachms. *Abdomen*: Organs natural; meconium in the colon.

CASE 44.—An infant three or four weeks old, found dead in a ditch in the Regent's Park; brought to the infirmary by the police. A verdict of wilful murder returned against some person or persons unknown for exposure. No marks of violence on the body; the navel-string had ulcerated off in the usual way. *Head*: Cerebral veins congested with dark-coloured blood; weight of brain, $19\frac{3}{4}$ oz. *Chest*: Congestion of blood in the lower lobe of the right lung, weight $1\frac{1}{2}$ oz., left 1 oz.; heart $\frac{3}{4}$ oz., and thymus body 3 drachms. *Abdomen*: The stomach contained sour creamy-like fluid, weight 3 drachms; spleen, $\frac{1}{2}$ oz.; liver, $4\frac{1}{2}$ oz.; kidneys, 9 drachms; capsules, $1\frac{1}{2}$ drachms; body, $128\frac{1}{2}$ oz.; relative weight of lungs to body, 1 to $51\frac{1}{2}$.

CASE 45.—An infant aged 3 months; found dead in bed beside its mother. The friends requested the body might be examined. The body was fat, and presented the natural appearance. *Head*: Brain natural in appearance; weight, $22\frac{1}{2}$ ounces. *Chest*: Thymus body unusually large; it almost concealed the lungs and pericardium, and probably may have interfered with the functions of respiration and circulation; weight, 5 drachms; the thymus fluid examined by the microscope was found healthy; the lungs healthy, each weighed $1\frac{1}{2}$ ounces; heart, 5 drachms. *Abdomen*: The mucous membrane of the intestines healthy; stomach, $\frac{1}{2}$ oz.; liver, $5\frac{1}{2}$ oz.; kidneys, 9 drachms, and capsules 1 drachm.

CASE 46.—Still-born; found tied up tightly in a piece of cloth. *Head*: The veins of the brain congested with very dark blood; the

organ weighed 13 oz. *Chest*: the lungs sank in water; the right weighed $1\frac{3}{4}$ oz., the left $1\frac{1}{2}$ oz. *Abdomen*: Organs natural; meconium in large intestines. The umbilical cord had been cut, and was 14 inches in length; no marks of violence on body; a slight mark on front of neck, and deep indentations, most likely from the child having been firmly pressed together. The abdomen and around the eyes and mouth slightly discoloured by incipient putrefaction.

CASE 47.—Still-born: a dropped child, apparently at full time. Well formed; the navel-string $15\frac{3}{4}$ inches long, either torn obliquely, or cut with a blunt instrument; no mark of violence on the body; meconium on flexures, and in quantity on back parts. *Head*: Convolutions prettily clearly marked; dark blood in veins; the encephalon weighed $12\frac{1}{8}$ oz. *Chest*: The lungs sank in water; the right weighed $\frac{3}{4}$ oz., the left $\frac{5}{8}$ oz. *Abdomen*: Intestines contained much meconium.

CASE 48.—New-born; found in a coal cellar; no marks of injury on the body externally. *Head*: On removing the scalp, about one ounce of blood was found beneath it and outside the skull; it had escaped from an opening in the membrane in the anterior fontanelle. There was a quantity of very dark-coloured blood, especially at base of brain on tentorium; also a good deal of blood in other parts of brain; the encephalon weighed $11\frac{1}{8}$ oz. *Chest*: The lungs pale, and filled with air in every part, so much so that they, with the thymus attached, floated. The right lung weighed $\frac{7}{8}$ oz.; the left, $\frac{9}{16}$ oz. *Abdomen*: Organs natural; meconium in large intestines.

CASE 49.—New-born; found in Regent's Park. *Head*: The veins were loaded with dark blood; the encephalon weighed $12\frac{1}{2}$ oz. *Chest*: The lungs were fully distended with air; the right weighed $1\frac{1}{8}$ oz.; the left, 1 oz. *Abdomen*: Viscera natural.

CASE 50.—New-born; found in a garden; the cord cut short—about one inch; no mark of ligature; a blue mark over the right side of face and nose. *Head*: Brain natural; weight, $12\frac{1}{4}$ oz. *Chest*: Lungs pale, preternaturally distended with air. The child may have been destroyed by pressure on the face, and the lungs over-distended by struggling and crying, or the mark on the face may have been produced by assistance during labour, and the over-distension of lungs by attempts at resuscitation by artificial inflation; the right weighed 1 oz., the left $\frac{3}{4}$ oz. *Abdomen*: Organs natural.

CASE 51.—Dropped child; newly born; body quite fresh; had not been washed; the navel-string not tied, 10 inches long, and seemed to have been attached to the placenta; no mark of violence nor blood on the body. *Head*: Half an ounce of dark blood on base of brain; weight of encephalon $13\frac{1}{2}$ oz. *Chest*: Lungs floated lightly in water, feebly distended with air; the right weighed 1 oz., the left $\frac{3}{4}$ oz. *Abdomen*: Organs natural.

CASE 52.—New-born. *Head*: Brain natural; weight, $11\frac{7}{16}$ oz. *Chest*: Lungs barely floated in water; the right weighed $1\frac{1}{4}$ oz., the

left 1 oz.; the thymus large, $\frac{3}{8}$ oz. *Abdomen*: Viscera healthy; the navel-string had been tied and cut in the usual way; only the natural semi-transparent mucus in stomach; no mark of violence on the body.

CASE 53.—Newly-born; found in a bye-lane; a hole burned through the frontal bone; the upper part of the face quite charred; the fingers burned off; the arms and knees were also charred. *Head*: Not examined. *Chest*: The lungs floated in water; the air could not be pressed out. *Abdomen*: Liver congested; intestines soft, and filled with meconium.

CASE 54.—Female infant found exposed; body weighed 108 oz. *Head*: Blood effused on arachnoid. *Chest*: Lungs quite buoyant.

CASE 55.—New-born; found in a box concealed, rolled up in a piece of brown silk; decomposition had commenced; cord 2 inches long, not tied; a slight mark on forehead; body weighed 98 oz.; length 21 inches; brain congested, $8\frac{1}{2}$ oz. *Chest*: Lungs distended and buoyant; a dark green substance in larynx, too large to pass through the rima glottidis, and a smaller portion in the left bronchus; examined by microscope; no conclusion arrived at. *Abdomen*: Mucus and meconium in intestines; urine in bladder; relative weight of lungs to body 1 to $78\frac{1}{2}$ oz.

CASE 56.—New-born; found exposed naked, at Alsop Terrace; brought to the infirmary by the police; the funis had been cut; not any mark of violence on the body; weight, $4\frac{1}{4}$ lbs.; length, 16 inches. *Head*: Blood effused on the surface of brain; weight, $9\frac{3}{4}$ oz. *Chest*: Lungs buoyant; each weighed 5 drachms. *Abdomen*: The organs normal.

CASE 57.—New-born; found exposed in the churchyard; brought to infirmary by the police. Funis tied; no marks on the body; weight, 7 lbs.; length, 21 inches. *Head*: Brain natural; 13 ounces in weight. *Chest*: Lungs dark and mottled, scarcely buoyant; the right, 1 oz.; left, $\frac{3}{4}$ oz.; heart, 1 oz., and thymus, $\frac{1}{4}$ oz. *Abdomen*: Glairy mucus in stomach, $\frac{1}{4}$ oz.; liver, 6 oz.; kidneys, 1 oz.; and capsules, 1 drachm. Relative weight of lungs to body, as 1 to 64.

CASE 58.—Aged 2 days. The child had been given to a lad, also a sovereign wrapped in paper, on which was notified that the keep of the infant would be paid for. The child was taken to a police station-house, where it was attended by a surgeon, and some medicine and nutriment were given to it. Soon after it was brought to the infirmary, but was unable to suckle; her pulse was weak, the surface cold; she became unable to swallow, and died the following morning. The navel-string had not been tied in the first instance: a woman tied it at the station-house. *Head*: Brain natural; weight, $12\frac{5}{8}$ oz. *Chest*: Lungs floated; they were pretty well dilated; two or three air-bubbles beneath pleura; some yellowish mucus in bronchial tubes; the right lung weighed 1 oz., the left $\frac{3}{4}$ oz. *Abdomen*: Organs natural. Death attributed to exposure.

CASE 59.—Between five and six months; some time dead in utero.

Head: Fluid in the brain; the encephalon weighed $5\frac{3}{4}$ oz. *Chest*: Lungs sank in water. *Abdomen*: All the viscera bleached and soft.

CASE 60.—Between fifth and sixth month; there was dropsy of the tissues; the fetus had been dead some time before it was expelled.

Head: The encephalon weighed $3\frac{3}{4}$ oz. *Chest*: The lungs sank in water. *Abdomen*: Viscera bleached and soft.

CASE 61.—From six to seven months; had the appearance of having been dead for some time; the cuticle denuded in many places. *Head*: Brain pulpy; weight, $4\frac{5}{8}$ oz. *Chest*: Contained fluid; the lungs sank in water. *Abdomen*: Organs natural.

CASE 62.—Male; premature; about six months. *Head*: The brain natural, soft, as is usual. The arachnoid injected; peeled off the brain, and left a soft creamy substance almost devoid of convolutions. The encephalon weighed $5\frac{2}{3}$ oz. *Chest*: Each lung weighed $\frac{5}{8}$ oz.; they were rather pale, and sank in water; fluid in pericardium. *Abdomen*: Parts natural.

CASE 63.—Some short time dead in utero; the cuticle peeled off. *Head*: Brain pulpy; weight, $12\frac{3}{8}$ oz. *Chest*: Lungs sank in water. *Abdomen*: Organs natural; meconium in the large intestines.

CASE 64.—Appeared to have been some time dead in utero; the mother affected with puerperal convulsions, of which she died the day after delivery. *Head*: Brain natural, weight $13\frac{1}{8}$ oz. *Chest*: Lungs sank in water; large thymus. *Abdomen*: Organs natural.

CASE 65.—Between eight and nine months; first child; mother aged twenty years, light hair, pale and thin; a large quantity of water escaped with the child; also after its birth. *Head*: Two ounces of clotted blood on the surface of the brain; the encephalon weighed $6\frac{1}{4}$ oz. *Chest*: Lungs pale and firm, and purulent matter could be pressed from the bronchial tubes, which had the appearance of pale chronic pneumonia. The right lung weighed $1\frac{1}{8}$ oz., the left 1 oz. *Abdomen*: Organs natural.

CASE 66.—A well-formed and full-grown infant. *Head*: Brain natural; weight, $17\frac{1}{4}$ oz. *Chest*: Lungs sank in water; thymus large. *Abdomen*: Viscera natural.

CASE 67.—Full-grown infant. *Head*: Brain congested; weight, $14\frac{3}{4}$ oz. *Chest*: Lungs sank in water; thymus large. *Abdomen*: Organs natural.

CASE 68.—A large child. *Head*: Brain healthy; weight, $16\frac{3}{4}$ oz.; more blood than natural in the sinuses. *Chest*: Lungs sank in water; thymus large. *Abdomen*: Viscera natural.

FEMALES.

CASE 69.—Abortion; fifth month of utero-gestation; the mother a patient with rheumatic fever; when taken in labour it was supposed at first to be from the operation of cathartic medicine; the child was well formed. *Head*: The convolutions of brain not well defined, but the organ pretty firm; it weighed $3\frac{1}{2}$ oz. *Chest*: Organs

natural; lungs sank in water. *Abdomen*: Organs natural; meconium in large intestines.

CASE 70.—Abortion; skin red and thin; no fat deposited. *Head*: Convulsions of brain indistinct, covered by a vascular membrane; blood-vessels minute; no extravasation; the weight of encephalon was $\frac{7}{8}$ oz. *Chest*: Lungs pale red, solid; sank in water; lobes distinct; three of right, two of left; each weighed $\frac{1}{4}$ oz.; the heart was pale, also the thymus. *Abdomen*: The liver of a dark purple colour; gall-bladder semi-transparent; the stomach filled with yellowish glairy matter, as in the stomach of a full-grown fetus; the bladder full of clear urine; the organs of generation distinct; clitoris, or internal and upper labia much more developed, and larger near the external labia; the intestines well marked, light coloured; the small containing greenish meconium, the large darker coloured from a quantity of dark meconium, some of which filled the rectum, and part appeared at the anus.

CASE 71.—Seven months child. *Head*: Brain soft; weight, 5 oz. *Chest*: Lungs sank in water; no fibrin or clotted blood in the heart. *Abdomen*: Viscera natural.

CASE 72.—A small child, apparently about seven months. *Head*: Brain normal; weight $10\frac{1}{8}$ oz. *Chest*: Lungs sank in water. *Abdomen*: Organs normal; meconium in the intestines.

CASE 73.—About a seven months child; appeared to have been a short time dead in utero; edema of the cord. *Head*: Brain pulpy; weight $5\frac{3}{4}$ oz. *Chest*: Parts natural for a still-born. *Abdomen*: The spleen very much larger than natural— $1\frac{1}{8}$ oz., and loaded with dark blood; pancreas large and firm; no mucus in stomach; meconium in the intestines; other organs natural.

CASE 74.—In a semi-putrid state. *Head*: Brain quite soft. *Chest*: Lungs sank in water. *Abdomen*: Parts quite soft.

CASE 75.—An eight months child; had been dead for some time in utero; the epidermis was partially peeled off; bloody sanies infiltrated and stained the membranes; and the cavities were nearly filled with it. *Head*: Brain pulpy, of a pink colour; its weight 7 oz. *Chest*: The lungs sank in water. *Abdomen*: The whole of the organs of a dark pink colour; meconium in the intestines.

CASE 76.—About $8\frac{1}{4}$ months child; the mother had not felt the child for a few days before delivery; feet presentation; the waters broke at the same time; the cuticle was beginning to separate on the abdomen. *Head*: Brain natural; weight $10\frac{1}{4}$ oz. *Chest*: Both lungs soft, like pneumonia, and sank in water; the right weighed $1\frac{1}{2}$ oz., the left 1 oz. *Abdomen*: Organs normal.

CASE 77.—Full time. *Head*: Brain a pink-coloured pulp, weight $14\frac{1}{2}$ oz. *Chest*: The lungs sank in water. *Abdomen*: The left lobe of the liver nearly as large as the right; the organ weighed $6\frac{1}{2}$ oz.

CASE 78.—Female, still-born, premature, encephalous fetus; those who were present at its birth said it resembled a monkey; the eyes

were prominent, the eyebrows on top of head ; skull quite flat, and open behind ; a soft mass, the form of the cerebellum, in its place, covered by a thin membrane ; when the mass was opened it appeared to be like coagulated blood and fibrin ; the occipital bone was deficient, the frontal, temporal, and parietal resting on base of skull, the opposite sides lined by a serous membrane without anything else intervening ; the most prominent part posteriorly was the basilar process : there was a white line from back of orbit which at first appeared to be the optic nerve, but on examination it was found to be bone ; the spinal marrow was bifurcated in the lower part, and in the upper part natural ; the cervical *vertebræ* curved forward, their bodies pressed together forming a cavity in which was the mass corresponding to the cerebellum. *Chest*: Lungs sank in water. *Abdomen*: Viscera natural.

CASE 79.—*Head*: Effusion of blood in brain, swelling of back part, and flattening of right side of skull, which appeared to be the result of pressure in delivery ; the surface of the brain was covered with dark blood, and a considerable quantity was effused on the base of the skull ; the encephalon weighed $15\frac{3}{4}$ oz. *Chest*: Both lungs sank in water. *Heart*: The foramen ovale nearly closed, a small opening only remaining, with a fibre stretching across it, and dividing it into two. *Abdomen*: Organs natural ; meconium in colon.

CASE 80.—*Head*: About three ounces of dark blood, principally at the base of the brain, on the tentorium ; some also on surface of cerebellum and about the medulla. *Chest*: The lungs sank in water ; the heart large. *Abdomen*: Viscera natural.

CASE 81.—A large and well-formed child. *Head*: Brain natural, weight $15\frac{1}{8}$ oz. *Chest*: A small quantity of air in the anterior edge of upper lobe of left lung, just sufficient to prevent its sinking ; the right lung sank, yet it contained a little air ; the right lung weighed $1\frac{1}{4}$ oz., the left 1 oz. *Abdomen*: The organs natural ; very little meconium.

CASE 82.—A very large child ; the cuticle peeled off chest, limbs, &c., showing the child had been dead in utero. *Head*: Brain congested ; weight $12\frac{1}{2}$ oz. *Chest*: Contained fluid ; both lungs sank in water ; the heart was filled with dark coagulated blood. *Abdomen*: Contained fluid.

CASE 83.—*Head*: Brain natural ; weight, $8\frac{5}{16}$ oz. *Chest*: Lungs sank in water ; ecchymosis on the upper lobe of each beneath the pleura ; each lung weighed $1\frac{1}{4}$ oz. *Abdomen*: Organs natural ; meconium in the intestines ; spots like purpura on the front of neck beneath the epidermis.

CASE 84.—Brain congested ; weight, $13\frac{1}{8}$ oz. *Chest*: Both lungs sank in water. *Abdomen*: Organs normal.

CASE 85.—Brain congested ; weight, $15\frac{1}{2}$ oz. *Chest*: Lungs sank in water. *Abdomen*: Organs normal.

CASE 86.—*Head*: Convolutions not fully developed ; the brain had a yellowish tinge, and weighed $10\frac{5}{8}$ oz. *Chest*: The lungs sank

in water ; the thymus very large and pale ; it nearly filled the entire of the mediastinum. *Abdomen* : Organs normal.

CASE 87.—The mother was attacked with puerperal convulsions 15 hours before delivery ; they ceased half an hour after, then came on again, and continued for three hours ; after which they altogether ceased. *Head* : Brain congested ; weight, $14\frac{7}{8}$ oz. *Chest* : Organs natural. *Abdomen* : Viscera natural ; meconium in intestines.

CASE 88.—Full time. Arm presentation ; the child was turned, and the woman delivered. *Head* : Brain natural ; weight, $13\frac{1}{2}$ oz. Blood in base of skull below cerebellum. *Chest* : The lungs were inflated artificially, and floated in water. The right weighed $1\frac{7}{8}$ oz., the left $\frac{3}{4}$ oz. *Abdomen* : Organs natural.

CASE 89.—Full time. Only eight hours in labour ; head long in passing. *Head* : Three-quarters of an ounce of dark blood on tentorium. The encephalon weighed $14\frac{5}{8}$ oz. *Chest* : Both lungs sank in water ; green matter, resembling meconium, in the bronchial tubes. The right lung weighed $1\frac{1}{4}$ oz., the left, $\frac{3}{4}$ oz. *Abdomen* : Organs natural, but little meconium in the intestines.

CASE 90.—Lingering labour ; first child. It moved after delivery, but did not breathe. *Head* : Brain congested ; weight, $16\frac{3}{8}$ oz. *Chest* : Lungs sank in water. *Abdomen* : Organs natural ; the bladder distended with clear coloured fluid.

CASE 91.—The mother five days in labour ; her first child ; the waters broke 40 hours before her death. The child very large. *Head* : Blood effused beneath the scalp. The brain natural, weight, $16\frac{7}{8}$ oz. *Chest* : The lungs sank in water. *Abdomen* : Organs natural.

CASE 92.—A lingering labour of thirty hours' duration ; head long in coming down, although the parts were well dilated. *Head* : Half-an-ounce of dark fluid blood at base of brain. The encephalon weighed 15 oz. *Chest* : The lungs sank in water ; the heart large. *Abdomen* : Viscera natural.

CASE 93.—Craniotomy performed in consequence of convulsions, which increased so as to endanger the mother's life. They were very frequent for seven hours, and the labour pains during that time having produced but little effect, the child's head, which was impacted between the sacrum and pubis, was opened, and the child taken away in half an hour afterwards. The mother had a convulsive fit when the child's head was drawn down by instrument after the removal of the brain, and about two hours after the removal of the child, she had two fits, each of which lasted about three minutes. *Chest* : The lungs could scarcely be said to float, and would have been regarded as the lungs of a child that had never breathed, if it had not been seen and known to have lived by the examiners. There was a small portion only of air to be observed in the thin edges, none in thick part of lungs. *Abdomen* : Organs natural ; viscera healthy. The infant was large and well formed ; the mother a small person, aged 18 years.

CASE 94.—Lived only 15 minutes. *Head*: Brain natural. *Chest*: The lungs floated; the air could be pressed out with the hand so as to cause the lungs to sink. The right lung weighed 2 oz., the left $1\frac{3}{4}$ oz. *Abdomen*: Organs natural.

CASE 95.—Aged $9\frac{1}{2}$ hours. The infant cried feebly; the breathing very feeble; lips blue; it made one faint attempt to suck; passed water once; no motion from bowels. *Head*: Brain natural; weight, $11\frac{3}{4}$ oz. *Chest*: A lobe of the liver, with about one-half of the intestines in the right pleura, through a large opening in the diaphragm.

CASE 96.—Aged 20 hours, a twin; the other still-born; about the seventh month. The placenta adherent; one twin pink colour, the other quite white. The still-born child had been some time dead; the brain was quite pulpy, and the epidermis peeled off. The living child was quite blue. *Head*: Brain convolutions not developed; structure smooth; the consistence of newly-made starch. Colour, grey and white; parts nearly alike. Weight of the encephalon, $5\frac{7}{8}$ oz.

CASE 97.—Male, aged two days, white. *Head*: Brain, watery yellow, sufficiently firm; weight, $9\frac{3}{4}$ oz. *Chest*: Lungs mottled, with red spots of various sizes, which seemed to depend on their not being entirely dilated with air. The right weighed 1 oz., the left $\frac{3}{4}$ oz. *Abdomen*: Organs natural.

CASE 98.—Aged 2 days; an eight months child; so feeble that it could scarcely swallow, and it could barely be said to breathe. *Head*: Brain, dark-coloured on surface from blood on the pia mater. The encephalon weighed $8\frac{7}{8}$ oz.

CASE 99.—Aged 3 days; an eight months child. Slight icterus. *Head*: The membrane rather dark coloured; the brain, in other respects, natural. *Chest*: Organs natural. *Abdomen*: Viscera, natural.

CASE 100.—Aged 4 days. Slight brown colour of the skin and tissues. *Head*: Brain natural; weight, $11\frac{3}{8}$ oz. *Chest*: Organs natural. *Abdomen*: Organs natural.

CASE 101.—Imperforate anus. Aged 4 days. There was an external natural opening up the gut for one inch, where it was found to end in a *cul-de-sac*. The child was swollen; the belly rather tense. A trocar was passed up, when some matter and blood escaped. The child died on the following morning. *Head*: Brain healthy; weight, $13\frac{7}{8}$ oz. *Chest*: Organs natural. *Abdomen*: Stomach and large intestines distended with gas; in the former was a clot of blood weighing 2 oz., with a quantity of serum. A bougie could be passed from anus externally into peritoneum, which the trocar perforated before entering the *cul-de-sac* of the rectum. There was about $\frac{3}{4}$ of an inch of cellular structure between the upper *cul-de-sac* of rectum and the lower one.

CASE 102.—A very large child; full time. Brain natural; weight, $14\frac{7}{8}$ oz. *Chest*: A large thymus occupying a great portion of upper

part of chest ; weight, $\frac{3}{4}$ oz. Lungs sank in water. *Abdomen* : Organs natural, meconium in the large intestines.

CASE 103.—The child large and well formed. *Head* : Blood on surface of brain ; weight of encephalon, $14\frac{1}{8}$ oz. *Chest* : The lungs sank in water. *Abdomen* : Viscera natural.

CASE 104.—Full grown and well formed. *Head* : A small quantity of blood on the tentorium. The encephalon weighed $13\frac{5}{8}$ oz. *Chest* : Lungs sank in water. *Abdomen* : Organs natural, meconium in large intestines.

CASE 105.—*Head* : Blood effused in the surface of brain. The encephalon weighed $13\frac{5}{8}$ oz. *Chest* : The lungs, which did not occupy more than half the chest, sank in water. *Abdomen* : Organs natural.

CASE 106.—A large child, appeared to have arrived at full time. *Head* : Brain normal ; weight, $12\frac{3}{16}$ oz. *Chest* : Lungs sank in water. *Abdomen* : Organs normal, meconium in the intestines.

CASE 107.—Full time. The mother had one child previously, which was also still-born. Presentation natural. *Head* : Brain normal ; weight, $11\frac{7}{8}$ oz. *Chest* : Lungs sank in water. *Abdomen* : Organs natural, meconium in the intestines.

CASE 108.—*Head* : Brain natural ; weight, 12 oz. *Chest* : Lungs sank in water. *Abdomen* : Organs natural, meconium in the large intestines.

CASE 109.—Full time. The mother had previously three miscarriages. *Head* : Blood effused on tentorium, the weight of encephalon, $12\frac{7}{8}$ oz. *Chest* : Lungs sank in water. *Abdomen* : Organs natural.

CASE 110.—*Head* : Vessels on surface of brain congested ; the organ itself soft, pulpy, and sticky ; it weighed $10\frac{1}{2}$ oz. *Chest* : The substance of the lungs resembled that of liver, but more flaccid ; both sank in water, the right weighed 1 oz. the left $\frac{7}{8}$ oz. *Abdomen* : Organs normal, except the capsules, which were about half the size of the kidneys ; meconium in the intestines.

CASE 111.—Three weeks before delivery the mother was run against in the street, and flooding followed, which afterwards ceased. *Head* : Brain natural ; weight, $10\frac{7}{8}$ oz. *Chest* : Lungs sank in water. *Abdomen* : Organs natural.

CASE 112.—Funis discoloured, quite green. *Head* : About two ounces of blood escaped from the brain. The encephalon weighed 12 oz. *Chest* : Lungs sank in water. *Abdomen* : The mucous membrane of small intestines of a bright red colour, that of the largest intestines natural. The stomach and intestines contained meconium.

CASE 113.—Lingering labour ; the cord born first ; the pulsation had stopped before the head was born. *Head* : Some blood below scalp. The encephalon weighed $13\frac{3}{8}$ oz. *Chest* : The lungs very dark coloured ; a little air at point of middle lobe right lung, sufficient

ABSTRACT OF WEIGHTS.

The Maximum, Minimum, and Average Length, and Weight of the Body and Principal Internal Organs, in each sex, in 221 Infants, at three periods of existence.

I. *Premature Still-born Infants; 28 Males and 20 Females.*

(Lungs sank in Water.)

	SEX.	BODY.		BRAIN.	CHEST.			ABDOMEN.		PLOUGHET'S TEST.
		Length. Inches.	Weight. Ounces.		Lungs. Ounces.	Heart. Ounces.	Thymus. Ounces.	Liver. Ounces.	Kidneys. Ounces.	
Maximum	M. F.	18 18	85 75	9'2 9'1	2'5 2	'75 '62	'33 '19	7 5'5	1'1 '75	
Minimum	M. F.	10 10	12 8'5	1'3 1'2	'22 '12	'06 '06	'01 '01	'5 '25	'13 '6	
Average	M. F.	14 13'5	45'5 38	5'6 4'6	'83 '68	'31 '26	'1 '07	2'4 2'1	44 '32	

2. *Still-born, full period; 51 Males and 32 Females.*

(Lungs sank in Water.)

2. <i>Sun-orn, juv perov, 51 minutes and 32 females.</i>										
(Lungs sank in Water.)										Relative Weight of Lungs to Body.
M. F.	22 22	172 154	22 15'12	3'5 2'3	1'7 1	'75 '75	8'5 8'5	1'7 1'6	as 1 to 49. 1 to 67.	
Maximum										
M. F.	16 17	60 67	9'37 8	'8 1'1	'37 '16	'06 '08	2'7 2'6	'5 3	1 to 75. 1 to 61.	
Minimum										
M. F.	18'5 19	105'7 98'5	13'87 12'25	1'8 1'8	'7 '6	'31 '3	5'3 5'5	'89 '82	1 to 58. 1 to 54½.	
Average										

3. *New-born; 45 Males and 45 Females.*

(Lungs buoyant in Water.)

Maximum	M.	21	140	15'37	3	1'25	1'5	8'5	2'25	as 1 to 47. 1 to 46.
	F.	21	128	10	2'8	1'12		8'7			1'5
Minimum	M.	14	42'5	6	'66	'18	'06	1'75	'25	1 to 64. 1 to 54.
	F.	14	25	1'75	'46	'16		1'25			'02
Average	M.	18'2	81	11'67	1'8	'54	'25	4	'87	1 to 43'8. 1 to 35'1.
	F.	17'5	67'7	10	1'9	'59		3'8			'21	'68

ABSTRACT, ILLUSTRATIVE CASES.

Abortions—8 Males and 7 Females.

No. M.	BODY.		HEAD, BRAIN.	CHEST.	ABDOMEN.	REMARKS.
	Weight. Ounces.	Length. Inches.				
1	22	?	2½ oz.	Lungs. Heart.	Liver, &c.	From lying-in ward; mother had syphilis.
2	24	11	Brain firm, convolutions indistinct, 3¼ oz.	Half ounce of serum in left pleura, less in right lung, ⅔ oz.; heart, 3iij; thymus, 3j. Right lung, 3vj. Left lung, 3v. Heart, 3iij. Thymus, 3j.	1½ oz. Spleen, ¼ oz. Testes in the ring. Renal capsules, 3j. 1 oz. Kidneys, 3iv. Capsules, 3j. Meconium in intestines.	Twin from lying-in ward. About 5th month. Face presentation.
3	27	11	Brain firm, 3 oz. 3v (29 drachms).	Right lung, 3vj. Left lung, 3vj. Heart, 3iij. Thymus, 3j.	¾ oz. Kidneys, 3iij. Capsules, 3j. Meconium in intestines.	Twin brothers, born 1 hour later than preceding, well formed.
4	26	13	A little blood beneath scalp, 4 oz. and 3iss.	Each lung, 3vj. Heart, 3iv. Thymus, 3j.	Blood in peritoneum. 1½ oz. dark; kidneys, 3ix. Capsules, 3ivss. Meconium.	Brought in for burial. Skin firm, red.
5	Pale. 18	14	Semifluid, 3½ oz.	Right lung, 3ix. Left lung, 3viiss. Heart, 3vss. Thymus, 3ij.	1½ oz. Kidneys, 3iij. Capsules, 3ss.	Brought in for burial. Epidermis abraded.
6	18	11	1½ oz.	Right lung, 3vj. Left lung, 3v. Heart, 3ij. Thymus, 3ss.	1½ oz. Kidneys, 3iij. Capsules, 3j.	About 5th month. Mother an idiot.
7*	12½	10	Cerebrum smooth. Blood in lateral ventricles, 1½ oz.	Lungs pale, right, 3v. Left, 3iv; heart, 1½j. Thymus, grs. v.	¾ oz. Kidneys, 3iij. Capsules, 3ss.	About 4th month. Convolutions distinct enough on cerebellum, medulla oblongata firm.

to cause that lobe to float ; when pressed out both lungs sank in water. *Abdomen* : The organs and parts congested.

CASE 114.—Lingering labour, three and a half days' duration, insufficient labour pains. *Head* : Blood effused on the tentorium, and the brain congested ; it weighed $13\frac{1}{4}$ oz. *Chest* : Lungs sank in water ; fluid in pericardium. *Abdomen* : Organs natural.

CASE 115.—The child extracted by Cæsarean section, head first. *Head* : Surface of brain congested ; weight $15\frac{5}{8}$ oz. *Chest* : Lungs sank in water. *Abdomen* : Organs natural, dark meconium in the intestines.

CASE 116.—Aged 12 hours. Six weeks before time according to the mother's account. *Head* : Brain natural ; weight, $8\frac{5}{8}$ oz. *Chest* : The right lung was merely suspended in water above the bottom of the vessel ; it cut firm ; was mottled red, yellow, and light brown, having the appearance of a lung passing from first to second stage of pneumonia ; the volume large, much more so than that of a lung which has never been permeated by air ; some frothy purulent matter in bronchial tubes. Ecchymosis on surface beneath the pleura. The left lung was much more buoyant than the right, but the lower lobe was similar to that of right lung. The right lung weighed 2 oz., the left 1 oz. *Abdomen* : Organs normal, meconium in the large intestines.

CASE 117.—Aged 3 days ; about $7\frac{1}{2}$ months ; it died in convulsions ; the surface of body was of a purple colour. *Head* : Brain pulpy ; weight, $8\frac{3}{4}$ oz. *Chest* : Both lungs floated ; the structure was dense, and their lower lobes were of a dark red colour ; each lung weighed $1\frac{1}{2}$ oz. *Abdomen* : Parts natural.

CASE 118.—Aged 3 days ; twins ; about the seventh month ; the brother died on day after delivery. *Head* : Brain not fully developed ; fluid in the membranes ; weight of encephalon $6\frac{3}{8}$ oz. *Chest* : The lungs, which were of a dark brown colour, floated in water ; the right weighed 1 oz. ; the left, $\frac{5}{8}$ oz. *Abdomen* : Organs natural ; some red fluid blood mixed with mucus of the stomach, as if from a sore nipple.

CASE 119.—Aged 7 days. The mother stated that she was six months and one week with child. The infant weighed only 31 oz. at birth ; it was never sufficiently strong to take the breast, and was fed by drops of arrowroot and milk. The finger and toe nails were not fully developed. *Head* : The convolutions of brain not developed ; weight of encephalon, $4\frac{3}{4}$ oz. *Chest* : The lungs floated in water ; the right weighed $\frac{7}{8}$ oz., the left $\frac{6}{8}$ oz. *Abdomen* : Organs natural.

CASE 120.—Aged 10 days. *Head* : Brain natural ; weight, $11\frac{7}{16}$ oz. *Chest* : Lungs natural. *Abdomen* : Organs natural.

CASE 121.—Aged 13 days ; no marked symptom of disease during life, but very feeble, and unable to take food. An eight months child. *Head* : Brain normal. *Chest* : Organs normal. *Abdomen* : Viscera natural.

CASE 122.—Aged 14 days ; a seven and a half months child ; the

mother a patient with asthma in the infirmary. *Head*: The convolutions of the brain imperfectly developed, and the structure indistinct; all had the same appearance. *Chest*: Both lungs floated in water. *Abdomen*: Parts natural.

CASE 123.—Aged 5 weeks; the mother affected with secondary eruption and warts. Her milk dried up, and the child wasted and died; much emaciated. *Head*: Brain normal; weight, $11\frac{5}{8}$ oz. *Chest*: Lungs healthy. *Abdomen*: Organs natural; mesenteric glands enlarged.

CASE 124.—Aged 2 months. *Head*: Brain natural; weight, 12 oz. *Chest*: Carnification of lungs; part did not sink in water; each lung weighed 1 oz. *Abdomen*: Organs natural.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Meeting, July 1st, 1874.

*Note of a Case of Temporary Loss of Voluntary Power in a Child,
produced by a Touch on the Head.*

By JAMES DUNSMURE, Jun., M.D., F.R.C.S.E.

A. B., aged five years, was brought to the Children's Hospital on the 16th January, 1874, suffering from a temporary loss of voluntary power, produced by anything that touches his head without his being conscious of it going to be touched.

The patient's mother gave the following history on his admission:—He enjoyed perfect health, with the exception of an attack of measles, followed by pneumonia, until he reached the age of two years and a half, when one day, on patting him upon the head, she noticed him fall forward into her arms. Ever since that time, on his head being touched, without his before being made aware of it, he has fallen to the ground. He walked when two years and three months old. Dentition was easy. At first, the attacks were slight and frequent, but diminished in number on his being kept in bed. Lately they have increased in frequency and severity, and last about five minutes, when perfect recovery takes place. He is never insensible during one, but appears perfectly conscious of everything that is going on around him. Three months ago he was noticed to lose the power of his right arm and leg during an attack. If he has anything in his hand at the time, it is immediately dropped. When he is made aware that his head is to be touched, no attack takes place. On his getting a knock on the back, or any other part of the body except the head, he does not fall, but starts a good deal. From infancy he has started and screamed much during his sleep. He has no fear of being left alone in a dark room. He never had convulsions during teething, and never had a fright. He is unable to speak, with the exception of saying a few words, and is

very much frightened at animals, as a dog or cat, but is not in the least shy with strangers, making friends with them at once. He has never suffered from worms, and his bowels are regular. Unless he is kept warm round the lower part of his body, he is subject to incontinence of urine. His gait has always been noticed to be unsteady. Lately, on awakening from sleep, he cries, and is more irritable than he used to be.

Family History.—He has two brothers and two sisters, all of whom are healthy, with the exception of one sister, who suffers from curvature of the spine. There is no history of epilepsy on the father's or the mother's side. The father is of a very nervous temperament.

Present Condition.—The boy has the appearance of perfect health, and is well nourished. The head is well-formed. The eyes are bright; there is no squinting, though he has a habit of looking sometimes from under his eyebrows, which gives him a look as if he squinted. He does not speak, but only says a few words with o in them, as "horse," which he pronounces "oss," "open," "ope," although he understands every word that is said to him. He hums several Scotch airs very correctly, and is very fond of music. He sleeps well, but starts much in the night; when he awakens, his face is always much flushed, and he cries for a little time afterwards. After an attack, on asking him if he has any pain, he points to his head, but is not able to indicate any particular affected spot. On touching any part of his head sharply when he is unaware of it, he immediately falls to the ground, perfectly powerless, though quite sensible, and remains lying for a minute or more till he is able to rise again. The first time I saw him, the muscles of the right arm and leg were slightly tonically convulsed; but that is the only time I ever noticed any approach to a convulsion. His mother told me that once or twice, when he had had a very severe fall on a day when he was particularly sensitive to attacks, she noticed slight tremor of the right arm or leg, or of both legs alone. During an attack he occasionally cries; the eyes are either half-shut or open, the pupils are unaffected; the face is generally flushed, but it sometimes becomes very pale a short time afterwards, and the arms fall to the side. The sphincters are never relaxed. On days when he has had a number of attacks, the hands are very unsteady, and shake a good deal. He has a tendency to fall to the left side; sometimes the right arm and leg are quite powerless, and remain so for a minute or more, and then recover, while he generally raises the affected arm up with his left hand. Within the last three months he has used the left hand more than the right for doing anything, as feeding himself, &c. &c.

It is not necessary for a second party to touch the head to induce an attack, for he frequently causes himself to fall while playing with a piece of paper or a ball, if it happens to come in contact with any part of the head; or even when touched suddenly with

his own hands, or in feeding himself, if the spoon comes against his face. Combing his hair is a frequent cause of an attack. On being made aware his head is to be touched, he is able to withstand the attack, even if a severe knock is given. He is generally in the greatest spirits, playing and romping about with other children; but some days he is irritable and dull, and on those days he is particularly subject to attacks. On the posterior part of the head there are generally one or two swellings, due to the falls he receives. Tapping him over the spine, especially in the dorsal region, causes him to start, and the right arm is jerked slightly away from the body. While eating anything hard he sometimes falls; for example, if given a lozenge or a bit of sugar, he bites it very cautiously, evidently afraid of it breaking, which, if it does suddenly, he either starts or falls down.

Galvanism applied to the head produces no attack, nor does the sudden application of heat or cold. Any sudden noise has no effect. When his head is touched during sleep, his whole body starts violently, and in about a minute or less his face becomes paler, which appears to me to be very much the same phenomenon as is produced when he is awake, only he is in the recumbent position, and is not able to fall. He drags his right leg very slightly on walking, and on going upstairs he always puts the left one up first. The digestive system is in good order; tongue moist and clean; urine normal; heart and lungs quite healthy; pulse 100; temperature 98.4°. Dr. Argyll Robertson kindly examined the eyes for me with the ophthalmoscope, and found them quite healthy. During the last six months he has improved very much; the attacks are neither so numerous nor so long. At present they rarely last above a minute.

Treatment.—When he was brought to the Hospital he was put upon five grains of bromide of potassium three times daily, which he continued for three weeks; but as he made no signs of improvement, and the attacks got worse, it was changed to Easton's syrup, which he took for some weeks. At first he got rather better, and his general health improved; but as the attacks were still continuing severe, I determined to try a course of arsenic, which he commenced about the beginning of March, and continued to the middle of May; during which time the attacks were not so frequent. Since then he has been having belladonna, which seems to suit him better than anything he has tried, so much so that for a whole week he had only one attack; and I thought he was going to get better, but since then he has had attacks, though not so numerous and severe. I was induced to try belladonna, from having read in the *Lancet* of its good effects in a case narrated by Dr. Ogle, which resembled this one, 1st, in the apparent consciousness during the attack; and, 2nd, in that it could be produced by a touch—viz., on the left arm.

Dr. Ogle's differed from mine in there always being true convulsions, and the inability on the patient's part to resist the attack. I have

been anxious to bring this case before the Society to-night, owing to its peculiarities ; so far as I know, no case presenting all these characters together having been observed before. A good many cases have been reported, where, from stimulating some part of the body distant from the head, a regular epileptic fit has been brought on preceded by an aura ; but this one differs from most of them by the almost invariable absence of any convulsive movement, together with the seeming consciousness during an attack, and of the power of warding it off under certain circumstances. It is extremely difficult to know whether there is at the time of fall a momentary loss of consciousness or not. If attacks have been induced when he is sitting, I have noticed his head fall forward for a second, and then immediately recover itself, during which time he may have been unconscious, or the falling forward of his head may have been entirely due to the loss of voluntary power.

If I may venture to give an opinion as to the nature of this curious affection, I am rather inclined to put it under that class of disease called epileptiform, but hope to have the views of members of this Society more experienced in obscure diseases of the nervous system than myself.

Obstetric Summary.

On Eclampsia (Puerperal Convulsions) : Management of Cases when the Cervix is neither Dilated nor Dilatable.

By Dr. LIZÉ, Ex-Surgeon-in-Chief of the Maternity of Mans.

Eclampsia is a formidable disease, which, after rupture of the womb, constitutes one of the gravest accidents that can possibly attack a woman during pregnancy, or in the midst of labour. My intention is not to study exhaustively so complicated a subject ; I wish simply to say a word on the treatment of this affection, or rather symptom, which may be due either to a neurosis, or to a lesion of the kidneys, or to an ill-defined alteration of the blood. But, before glancing at this chapter of therapeutics, it is necessary to remark that in uremic or toxic eclampsia, our art is almost totally disarmed, whilst in non-toxic eclampsia medical treatment, based on hydrate of chloral, bromide of potassium, or morphia, often answers well, and, when it is useless, the premature evacuation of the uterus is an ultimate resource, which may be crowned with success. I wish to be permitted to speak briefly of an entirely surgical treatment which has given me a satisfactory result in a case when we had not urinemia, but which was, nevertheless, characterized by the presence of albumen in the urine. This latter treatment is subject to the two following conditions :—1. The cervix uteri is dilated or dilatable. 2. The cervix is neither dilated nor dilatable.

In the first case, the delivery may be abandoned to the simple

efforts of nature, but often it is necessary to resort to the forceps or version. P. Dubois regards the emptying of the womb as advantageous to the mother and infant, when it can be done without violence. This is a wise rule, which is followed by the majority of accoucheurs.

But if the cervix uteri is neither dilated nor dilatable, what course ought to be pursued?

The counsels are divided: *adhuc sub judice*. P. Dubois counsels the non-employment of other than medical treatment, in abstaining from all procedures for emptying this organ, unless it spontaneously arises in the womb itself, such condition being capable of expelling the product easily and inoffensively. Another accoucheur, whose word is law, M. le Dr. Bailly, distinguishes certain cases in which the prompt extraction of the fetus should be resorted to. In his opinion, the introduction of the hand or an instrument into the uterus does not increase as much as is perhaps supposed the number and force of the eclamptic seizures, and ultimately the peril which these bring to the mother, and at the same time to the infant. Consequently, when medical treatment remains sterile, if after several hours he does not see regular contractions of the womb arise, he formally prescribes the provocation of labour, and the quickest possible emptying of the uterine cavity. To attain this end, the means employed are *forced delivery* on the one part, and *provoked delivery* on the other part. The procedure, which consists in the forcible engagement of the fingers and hand in the uterus, forms one of the most objectionable aspects of forced delivery. In effect, this violent practice is quite capable of exciting fresh eclamptic convulsions. On the contrary, according to the example of Velpeau, Cazeaux and Jacquemier, it is permissible to make small incisions into the cervix, and when this has become effaced, it is also permissible to enlarge its orifice by the careful and gentle introduction of the hand.

Lastly, after the employment of medical treatment, if labour does not set in, if the condition of the patient has become aggravated, one can equally have recourse to provoked delivery; in other words, one can excite uterine contraction by prepared sponge, laminaria tents, Kiwisch's douches, and above all, by the uterine dilator. Once the cervix has received its first impulse it undergoes pretty rapidly the modifications which tend to efface and open it.

The employment of progressive dilatation of the cervix has succeeded so well in a case of eclampsia at the eighth month of pregnancy in my hands when the cervix was neither dilated nor dilatable, that I do not think it desirable to allow it to be forgotten.

CASE.—Eclampsia in the eighth month of pregnancy, treated by the combined employment of chloral, hypodermic injections of morphia, and dilatation of the cervix uteri.

On the 12th of April last, at two o'clock in the afternoon, I was called in the Commune of Paulieue to Madame S., primipara, aged 22 years, and advanced to the eighth month of a straightforward pregnancy. This lady, a well-formed blonde of lymphatico-nervous

temperament, presented a great infiltration of the lower extremities only, to the exclusion of the face, arms, and hands. A notable quantity of albumen was observed in the urine, but the normal proportions of urea did not sensibly vary, the serous exudation preventing the urea from accumulating in the blood.

At ten o'clock in the morning of the same day she was taken with a first attack of epileptiform eclampsia, and the accessions succeeded one another every twenty minutes until two o'clock in the afternoon, the time at which I was called to her. I was then witness of a very intense accession, which was prolonged for about two minutes, with violent forcing of blood to the brain and complete abolition of the intellectual and sensorial faculties.

The access over, the patient fell again into the comatose state, accompanied by apoplectic snoring; to the left and below the beating of the fetal heart could be heard very distinctly with normal rhythm; examination showed a soft cervix still, rather long and completely closed. I was then in the presence of an eclampsia, at eight months of pregnancy, without any indication of labour. As I had never found bleeding useful, either in hospital or private practice, I had recourse to the employment of chloral hydrate, which has furnished such excellent results to several experienced accoucheurs.

At half-past two, having cleared out the intestine by a large enema, I gave, myself, an injection of ℥ss. of chloral hydrate in a few ounces of water; then, following the example of Dr. Condereau, I injected at once a small dose of hydrochlorate of morphia subcutaneously.

At the end of ten minutes the sleep lost its stertorous character and became absolutely calm. I profited by this to introduce into the vagina a trivalve speculum, and with the grooved forceps of Desgranges (of Lyons) I slowly introduced into the uterine cavity a long forceps with the blades crossed and strongly tempered, straight instead of curved, and deprived at their extremities of teeth or points, which renders it different to the vaginal forceps of Desgranges with still the same mechanism. In gradually closing the blades of the grooved forceps I gradually opened the crossed branches of the dilating forceps resting in the cervix uteri, and when I arrived at the greatest extent of their separation I thus maintained the two instruments in position in a fixed manner for a quarter of an hour, at which time I was obliged to suspend it on account of the supervention of a fresh attack of eclampsia, but less violent than the others. A second injection of ℥j of chloral in water, and another subcutaneous injection of morphia, were simultaneously administered to the patient, who quickly became calm again.

At this time examination showed that the cervical orifice, which was closed, had become as large as a two-franc piece; evidently the forceps engaged in its cavity had produced this advantageous result by gradual separation of its blades, which were pressed against the walls of the cervix with greater and greater centrifugal force. A fresh introduction of the forceps was made into the uterine cavity

just up to the internal orifice, and progressive dilatation of the instrument, as on the first occasion, was made for twenty minutes.

Flow of liquor amnii holding meconium in suspension ; beatings of fetal heart on auscultation found to be faster. At ten minutes past four in the afternoon a slight eclamptic attack was manifested only by some muscular contractions of the face, without tonic or clonic convulsions. Enema of 3ss of chloral only without a morphia injection. The cervix is nearly obliterated, and large enough to admit the index and a polypus forceps.

In my hands, as in those of M. Kœberlé, this instrument rapidly completes the dilatation of an already advanced cervix. At last, towards a quarter to five, the irritation sharply caused by this reacted on the fibres of the body of the uterus, and determined contractions, which became regular and continuous. At half-past five a contraction of the face announced another attack of eclampsia, which disappeared of itself, without recourse having been had to the chloral. The cervix nearly completely effaced, soft, dilatable—could admit one, two, and then three fingers of my hand. Lastly, at a quarter to six, the application of the forceps (procedure of Felix Hatin) terminated the delivery somewhat painfully. A female child was born, pale, and did not respire ; tickling the nostrils, flagellation, insufflation, alternate movements of elevation and lowering of the arms, warm baths, nothing restored life. A few minutes after delivery I removed the placenta without difficulty. From this time she had no eclamptic attack, and her getting up was very satisfactory.

Reflexions.—This case is interesting in many respects. First, it is manifest that we had here a non-toxic eclampsia, as was shown by the normal condition of the urea in the urine of the patient, and the simple infiltration of the lower extremities to the exclusion of the upper part of the body, which is frequently edematous in uremic eclampsia. In this non-toxic variety of eclampsia medical and surgical treatment judiciously combined may bring about advantageous results.

As regards bleedings, they were at once put on one side, because long practice has positively shown me that they augment the hydremia, do not ameliorate the nervous crises, favour pyemia during lying-in, and, lastly, that they render convalescence very long. Following the example of some distinguished practitioners, I had recourse then to chloral and subcutaneous injections of morphia. These two agents, simultaneously employed, have for their object diminution of the reflex sensibility as much as possible, lessening of the paroxysms, and finally the gaining of time for the prompt dilatation of the cervix by the successive introductions of the dilator.

Remembering the rapid and extreme dilatation of the urethral canal so happily effected by Professor Simonin (of Nancy) and my excellent friend Reliquet, I thought this method might also be applied to the cervix uteri, and I have preferred it to the slow dilatation by means of prepared sponge, laminaria tents, douches of Kiwisch, and

even the india-rubber bag, which have lately yielded such good results to Dr. Charnier in a case of eclampsia at the eighth and a half month of pregnancy. On the other hand, in place of passing gradually larger sounds into the cervical canal, as Dr. Kœberlé does, I have given preference to the vaginal forceps of Desgranges (of Lyons) modified as indicated above. In effect, it was easy to slide the smooth and slender extremity of the forceps into the external orifice of the cervix, and in gradually producing separation of its crossed blades, I could proportionally enlarge the cervical cavity in a way to make the dilating instrument ascend, a precious advantage which was more quickly and easily done than with a series of sounds of different calibres and placed at repeated intervals. I finished, like Kœberlé, with the application of long polypus forceps, because they furnished a degree of separation greater than the modified forceps of Desgranges. In effect, thanks to this separation, the dilatation already advanced was accomplished in an instant.

Assuredly I have not the presumption to consider as an invention the instrument I employed to dilate a closed cervix uteri; I have simply, having Desgranges' vaginal forceps at hand, which I have utilized at other times for narrowing the superior part of the vagina in cases of prolapse of the womb, profitably used them in the present instance by submitting one of them to the changes in question. It remains to be seen whether the whole of this instrumental apparatus will be preferred to those already known, to the species of speculum dilator of Dr. Ellenger, for example; which has been constructed on the model of the instruments of Perèrre and Holt used for dilatation of the urethra.

As I have never employed this operative procedure except in the actual case, I cannot speak as to its definitive value, only it is allowable to say that it may render some service when it is used for promptly dilating the cervix uteri in the occasions which require it.
—*Annales de Gynecologie*, Septembre, 1874.

Deformities of Pelvis.

By Dr. LAMBERT H. ORMSBY.

The consideration of the deformities of this important region is ever of the greatest moment and interest to the obstetrician. Happy indeed would it be if every child-bearing woman was possessed with a "standard pelvis;" but, unfortunately, too often we are made conscious of the very serious, and sometimes fatal effects, that are produced to mother and offspring when deformity or abnormality is present.

These distortions are divided, for convenience, as they affect the *brim*, the *cavity*, and the *outlet* of the pelvis, singly or collectively. There are many causes prone to produce obstruction in parturition, and Dr. Robert Lee said that, in his experience, about 1-6th of all the cases of difficult parturition which occurred in London depended

upon contraction of the pelvis from arrest of development or distortion, and in some cases the pelvis is so frightfully distorted that it is impossible to effect delivery at all; but recourse to removing the child piecemeal, or by other recognised methods, must be practised. In a certain Church there is what I believe to be an erroneous doctrine, which is to the effect that it is against the tenets of their creed to sacrifice the life of the infant for the safety of the mother, and perform, when necessity requires, Cesarean section instead of craniotomy. In some countries this unfortunate idea has been the means of causing many deaths of not only mothers, but also the infants of those who adhere most determinately to such a short-sighted doctrine.

Distortions of every description are met with in the pelvis, produced by various causes, and the diameters may be considerably below the "normal standard," and there are few osteological museums that do not present numerous examples of the frightfully distorted state the pelvis sometimes assumes.

Rickets and scrofula in early life, and mollities ossium in the middle or advanced periods of life are very frequent causes of deformity; some, indeed, are never detected until labour has actually commenced, which is effected by digital examination, or by contrivances made for the purpose of examining the pelvis at the brim. They are not much used in this country, and are more in vogue among our Continental brethren: the best known is Coutouli's pelvimeter, which resembles very much the rule with slide which is used by shoemakers for measuring the length of the foot; one end is introduced into the vagina until it reaches the promontory of the sacrum, the slide is moved until it is opposite the symphysis pubis, and then the antero-posterior diameter thus calculated. This may be applied and demonstrated very clearly in the lecture-theatre on a dry bony pelvis, but its value, to be of use, is only necessary in the lying-in chamber, and when labour has commenced and the soft parts are swollen and painful. The information thus elicited is found by experience to be of such a limited character that the finger seems to be the surest and most accurate method to be depended on.

There is another contrivance, which is the *compas d'épaisseurs*, or callipers of Baudelocque, and is intended to be applied externally to the woman's person. It consists of a compass, to the extremities of which are attached a curved arm, on the end of which there is a button; the arms are divaricated so as to place one button on the symphysis pubis, just below the mons Veneris, the other button being placed posteriorly on the sacrum opposite the promontory. This, like the other instrument, is a very uncertain test as regards the true measurement, and in my opinion not to be depended on. When other bones of the body, especially those of the lower extremities, as observed by Naegele, are distorted by some constitutional disease, as rickets, mollities ossium, &c., and by the general appear-

ance of the person, we may form a very fair reason for suspecting that the pelvis is also distorted ; to what extent, however, can only be ascertained by digital examination, and, as I have before mentioned in another part of these lectures that one deformity nearly always predisposes to another, yet it must be borne in mind that because the spine may be greatly curved, the pelvis need not be necessarily affected, for it occasionally occurs that the pelvis is perfectly natural and of normal capacity when other parts are greatly distorted. Ramsbotham mentions such a case. The degrees of obstruction caused by distorted pelvis are classified in various ways by different authors. The brim, the cavity, the outlet may be the situation, as before-mentioned, and the obstruction is generally divided into three varieties—viz. :—

1st. Those which will suffer the full-sized fetal head to pass entire.

2nd. Those through which delivery may be accomplished *per vias naturales* by means of premature labour, craniotomy, or mutilation of the fetus.

3rd. Those in which the degree of deformity is so extensive as to call for the Cesarean section, or the very early induction of abortion.

Causes of Deformity of Pelvis.—The various joints of the pelvis, like many other joints in the body, are liable to many forms of inflammation and their consequences—viz., ulceration, suppuration, and finally ankylosis, which occurs in the sacro-coccygeal joint, and is a most common obstruction in difficult labour in late marriages. Standing on one leg constantly, or one leg being longer than the other, tends to elevate one ilium, thereby placing the pelvis in an oblique position. Rickets, mollities ossium, constant sitting or standing in one position for a great length of time, excessive habitual horse exercise—Dr. Rigby mentions that frequent riding on horse-back at an early age will produce contraction of the inferior outlet, even in the healthy pelvis, and that the females among American nations who over-indulge in this exercise bear few children, and are often three or four days in labour, owing to the contracted state of the pelvis.

Exostosis, tumours, fractures of the pelvis, caused by accident, falls, or otherwise, are also frequent causes of distortion.

Treatment depends greatly on the cause, and deformities in this situation do not interest us to the great extent that deformities do elsewhere, unless the matter of child-bearing is concerned, or unless it has attained such a great extent as to become apparent ; for it must be borne in mind that very great deformity has often existed undetected until labour has actually set in ; therefore the treatment seems in these cases to be more *preventive* than really curative, and when there is a constitutional tendency, great care should be observed, and active out-door exercise exchanged for the sedentary, &c. ; constant change of position and attitude observed ; if one leg is longer than the other, a thick leather sole applied to the boot

until both legs are equal, good tonic medicine and nourishing food ordered, and sea bathing. Treatment of these distortions by mechanical aid is a plan that ought occasionally to be had recourse to, as some most ingenious instruments and appliances have been recommended from time to time. Where one ilium is considerably elevated, and the other depressed, sitting on a sloping seat is a most admirable plan, the elevated ilium being placed opposite the inferior part of the inclined plane, and the depressed ilium opposite the upper part of the plane. Sitting in such a position for ten, fifteen, or twenty minutes at a time every day for a lengthened period will have a wonderful effect in diminishing the obliquity, and stimulating debilitated muscles into action.

Deformities of the sacrum and coccyx may be considered under this category, as both have a deforming influence on the pelvis ; they not unfrequently are distorted, and produce (as can be seen by a visit to any anatomical museum), great deformity. Anchylosis of the coccyx with the sacrum is a most common occurrence after the middle period of life, particularly in women and in those who ride on horseback, also those who sit constantly, as dressmakers, milliners, &c. ; it frequently causes most distressing labours ; the bone is sometimes fractured, and this causes excruciating pain, particularly when the bowels are acting. This anchylosis may be met with as early as thirty-five, but mentioned by some authors as occurring later on in life ; it frequently gives great trouble in the first confinement of a late marriage. Treatment very much the same as that of the pelvis, and generally more *preventive* than *curative* ; and when the slightest predisposition is observed, everything should be adopted to prevent the deformity from increasing. As regards the treatment for pelvic deformity when labour has actually commenced, it is a matter that need not be much attended to at the time, as all attention, as a matter of course, will be directed to the happy and successful delivery of the fetus. Such treatment is entirely out of the scope of these lectures, and will be found at great length in works on obstetric medicine.—*Medical Press and Circular*.

Gynecic Summary.

On Feeding-Bottles.

By EUSTACE SMITH, M.D.

In the artificial rearing of infants it is of importance that food should be given to them from a feeding-bottle. By this means the natural method of taking nourishment is imitated ; the muscles of the mouth and cheeks are brought into play ; and the secretion of saliva—a secretion which very scanty at birth becomes gradually more copious and takes so active a part in digestion—is encouraged and increased.

Almost all babies will take their food more readily by this method, their instinct teaching them to suck everything which is put into their mouths. Even in cases where a deficiency in the hard palate presents so great an obstacle to sucking, on account of the impossibility of creating the necessary vacuum in the mouth, the difficulty can be overcome by a simple mechanical contrivance. Therefore, in every case of hand feeding a suitable bottle is the first thing to be desired.

To be satisfactory a feeding-bottle must fulfil three indispensable conditions: it must be simple in construction and easily manageable; it must be capable of being readily cleaned; and in its use the milk must flow easily and without great effort on the part of the infant. The ordinary feeder in use at the present time consists of a flattened glass flask closed at the mouth by a cap, which fits over the neck. A caoutchouc tube passes through the cap and is connected inside the bottle with a straight glass pipe. The other end of the elastic tube is attached to the teat, or mouthpiece, by means of a short hollow cylinder called the "union-joint." The teat is firmly fixed to this by means of the shield. In the construction of the cap and union-joint, metal, earthenware, or wood is employed. The metal used by the best makers is tin, and this, if cleanliness be properly attended to, is not objectionable. In the cheaper bottles sold in the shops for sixpence the mouth is closed by a perforated cork, through which the flexible tube passes. Here there is no cap, but in all essential points the construction is the same as in the more expensive articles.

In this apparatus it is important that the channel through the tubes should be perfectly free. The point at which the channel is narrowest is the union-joint, which connects the mouthpiece with the flexible tube. In a badly made bottle an impediment may exist at this point from carelessness in the manufacture, and may present a great obstacle to the ready passage of the fluid. Care also should be taken that the flexible tube passes completely through the cap before it becomes connected with the glass pipe. This is very important. In the early feeding-bottles constructed upon this model by O'Connell, the glass pipe passed from within the bottle through the cap, and was attached *outside* this to the caoutchouc tube. It was thus held rigidly in the centre of the bottle, and, as a natural consequence, when the apparatus was in use, unless the bottle was held upright during the whole meal, long before its contents were exhausted the milk ceased to flow as the end of the pipe soon came to be above the surface of the fluid, which necessarily gravitated to the lowest part as the bottle lay upon its side. When, however, the connexion between the two tubes is made within instead of outside the bottle, this disadvantage no longer exists, for the glass tube being free to move, its end is able to sink to whichever side of the bottle is undermost; and, therefore, always remains below the level of the fluid. The best bottles have a small cylindrical "stop," *i.e.*, a thick

ring of metal or wood placed within the flexible tube just above its junction with the glass pipe. The object of this is to prevent the latter from being drawn through the cap and thus held rigidly in the centre of the bottle.

The method of connexion of the cap with the neck of the bottle is not unimportant. It should not be too tight or air will be prevented from entering the bottle to supply the place of the milk which is withdrawn. A common plan is to line the interior of the cap with cork, but this substance, besides its risk of being broken and detached by careless handling, has the further disadvantage of absorbing milk, which turns sour, and may afterwards set up fermentation in fresh milk put into the bottle for a subsequent meal. In the best bottles the cap is constructed to screw on to the neck, as in the "Alexandra feeding-bottle," made by the Messrs. Maw, or is united to it by an application of the "bayonet catch," as in the "improved feeding-bottle," made by Messrs. Lynch and Son. In this very admirable apparatus three grooves on the inside of the cap pass over corresponding projections on the neck of the bottle; the cap is then turned to the right with a slight screwing motion and becomes securely fastened.

With badly made bottles infants often have very great difficulty in drawing up the milk, and can only do so by violent efforts which soon exhaust their strength or their patience. There are two reasons why milk in these cases may not flow easily—either the cap fits too tightly so that air cannot enter with sufficient facility in proportion as the liquid contents become diminished, as has just been mentioned; or the caoutchouc forming the flexible tube is too thin, so that it collapses when suction is applied. In the first case a small hole should be made through the cap so as to allow a free admission of air, or if the bottle be a simpler one closed at the mouth by a perforated cork, this may be slightly eased at the neck of the bottle so as to fit less closely. In the second case stouter caoutchouc should be used in the construction of the tube. In weakly infants or those much reduced in strength by acute disease, special attention should be paid to these points, as such children will often refuse to take the bottle if they find any difficulty in drawing up the milk.

Infants born with a cleft palate cannot suck from an ordinary bottle, as the deficiency in the hard palate prevents the necessary vacuum being formed in the mouth. Such children are, therefore, usually brought up with a spoon, and often waste and die through insufficient nourishment. An ingenious contrivance, first suggested by Mr. Oakley Coles, will, however, entirely remove the difficulty and enable them to suck with as much ease as if they suffered from no such congenital deficiency. The plan is a very simple one, and consists in attaching to the nipple of any ordinary feeding-bottle a flap of sheet elastic cut to fit the roof of the mouth. This flap must be of the shape and about the size of the bowl of a tea-spoon, and is to be sewn to the upper part of the stalk of the teat where this projects

from the shield. In the mouth of the child the flap forms an artificial palate which, if the sheet elastic chosen be sufficiently stout, offers firm resistance to the tongue pressing against it in sucking, and prevents fluid from passing into the nose in the act of swallowing.

The closest attention must be paid to the cleaning of feeding-bottles. Each time, after being used, the whole apparatus should be well washed out with water containing a little soda in solution. The inside of the cap must be carefully cleaned, and the brush should be carried several times through the whole length of the tubing. Afterwards the bottle and tubes should be laid in cold water until again wanted. An objection to the common brush usually supplied with each feeder is that after a few days' use the softened bristles are apt to get detached and be caught in the joints of the tubing, whence they may afterwards be washed by the stream of fluid and be swallowed by the child. Accordingly a new cleaner has been manufactured by Messrs. Maw and Sons, in which bristles are entirely dispensed with. They are replaced by a thin strip of caoutchouc, which is wound round in a spiral form at the end of the ordinary wire handle. This instrument answers all the purposes of a brush without the disadvantage alluded to, and is, besides, far more durable.

Excellent feeding-bottles are now made by many different manufacturers, and are sold at prices which place them within the reach of the poorest. These cannot all be mentioned, but some of the bottles more commonly met with may be shortly referred to. The sixpenny feeder made by Messrs. Maw, Son, and Thompson can be recommended for its simplicity of construction, and at the same time for its perfect efficiency. In this instrument there is no cap: instead, the mouth of the bottle is closed by a cork, which is perforated for the passage of the flexible tube. In all other respects the construction of this apparatus is the same as in the more expensive instruments. The "Alexandra feeding-bottle," price half-a-crown by the same makers, is an admirable bottle. The cap screws on to the neck, and is furnished with a small hole for the admission of air. A "stop" in the lower part of the flexible tube prevents the glass pipe being drawn into the cap, and the instrument is supplied with all the latest improvements. The bottles made by Messrs. Maw are all furnished with the new patent cleaner just described. The "improved feeding-bottle" made by Messrs. Lynch and Son at one shilling, and eighteen-pence, has been before referred to. The material used for the cap is boxwood. It is a capital bottle, and will give the fullest satisfaction to the purchaser. Mr. Lang's "Alma Mater" feeding-bottle can also be recommended. In this instrument the cap is made of earthenware, and is lined with cork. A good bottle is made by Mr. Elam, of Oxford Street, price two shillings; the cap is formed of Britannia metal, and screws on to the neck. A cheaper bottle, but one which for elegance of design and accuracy of detail cannot be surpassed, is Mr. Mather's "Princess" feeding-bottle. A tin cap screws on to the neck and is pierced by a small hole for the admission of air. This

opening is fitted with a "cone valve" of simple and ingenious construction, which allows air to enter freely when suction is applied to the tube, but closes firmly against any escape through the air-hole of the fluid contents of the bottle. The bottle itself has a double curve towards the neck to provide against any too sudden bending of the flexible tube against the cap. This is apt to happen when the curve is single, if the bottle lie with the convexity downwards, and partial obstruction of the tube may be the result. The "Princess" feeding-bottle is sold in the shops for eighteenpence.

All bottles bear their name in raised letters upon the glass, but a report which has obtained currency that these letters are hollow in the interior and difficult to clean is without any foundation in fact. Any one may test this for himself by placing a finger within the bottle underneath the letters, when the internal surface will be found perfectly plain and uniform.

In all cases where cork enters into the construction of a feeding-bottle especial care should be taken in cleaning the apparatus, and the cork should be well soaked in soda and water in order that any sour milk it may contain may be neutralized at once.—*Sanitary Record*.

Solid Tumours of the Ovary.

Dr. Leopold (*Archiv für Gynæk.*, Band vi. Heft 2) has a long paper on this subject. He has arranged in a tabular form 56 cases: 43 of these have been collected from various sources, and the remaining 13 are now published for the first time: a short account of these latter are given. He has arranged his remarks under three heads,—1. The general (including the frequency, character, and size of the tumour, and the age of the patient). 2. The anatomical. 3. Some clinical points of importance (menstruation, &c.). Solid tumours of the ovary are rare: from facts he has collected Dr. Leopold estimates that they are met with in the proportion of about 1.5 per cent. of all tumours of the ovary. Externally, solid tumours of the ovary somewhat retain the natural shape of the ovary, and thus are to be distinguished from fluid tumours, which have an irregularly rounded form. Their consistence varies—they may be so soft as to give the suspicion of fluid, or even as hard as a stone. The thickness of the external coat varies much, and this, Dr. Leopold thinks, is a point of some importance as regards the more or less rapid development of the tumours. It is quite conceivable that their envelope covering a medullary carcinomatous growth, or a cystic sarcoma, is powerless to arrest the rapid extension of their growth, whilst the firm envelope, limiting the more solid tumours, is an obstacle to their increasing. The anatomical relations of these solid tumours are almost identical with those of the fluid. One point is to be noted that is of value in diagnosis—when the pedicle is short you may find the tumour wedged down between the uterus and the rectum. These tumours

of the ovary, carcinomatous or sarcomatous, though resting against the uterus, rarely affect that organ, which is usually found quite healthy. Histologically, tumours of the ovary may be fibroma, enchondroma, sarcoma, or carcinoma. The fibromas are simple or complex, fibro-myoma, fibro-sarcoma. To this variety two others more rare must be added. The first, described by Waldeyer, offers for consideration besides the fibroid tissue, lacunar blood-spaces, and is very analogous to certain blood tumours. This variety may help to explain some rare cases of true ossification of the ovary. The second has been described by Spiegelberg, under the name of fibroma areolar. It consists of a framework of fusiform cells. In places the vessels are large, and resemble true cavernous structure, characters which singularly resemble those tumours properly called sarcomas. Enchondroma of the ovary is very rare; they must not be confounded with certain fibroma which present a cartilaginous consistence. Sarcoma of the ovary is said to occur very rarely; the text-book makes scarcely any mention of them, but Dr. Leopold has had the opportunity of examining many such tumours, and gives a full description of them. He then gives an account of carcinomatous tumours, and describes a tumour hitherto not described under the name of "Lymphangioma kystomatosum." It is characterized by the cystic formation, the dilatation of lymphatic vessels, and a proliferation of the stroma.

Under "clinical remarks," the author draws attention to the condition of menstruation in women suffering from cysts or solid tumours of the ovary. We know now from many instances that menstruation may go on when the two ovaries are degenerated, and even after they have been both removed. Insisting on the importance of these facts, Dr. Leopold inclines to the belief that menstruation has no direct relation with ovulation.

Ovariectomy was performed eight times for these solid tumours of the ovary, and only three times successfully. The Cesarean section was obliged to be performed once on a woman whose pelvis was narrowed through the presence of a partly ossified fibroma.

Cases of Ovariectomy at the Hospital for Women, Soho Square.

Subjoined is a statistical table of the cases of ovariectomy performed at this hospital during the past year. As will be seen, the table shows the date of operation, the number of each case as reported in our columns, the result, and the cause of death in the fatal cases. The list has, moreover, been so drawn up that all the cases by the same operator have been grouped together, and the average numerical results subscribed. In the 10 operations performed by Dr. Alfred Meadows there were 3 deaths, giving an average mortality of 30 per cent. In 9 operations by Dr. Heywood Smith there were 6 deaths, giving an average mortality of 66·6 per cent.; of the remaining 4 cases, 3 were successful, but the fourth (under the care of Dr. Edis) died

from malignant disease of the pelvic viscera. Altogether, there were 10 deaths out of a total of 23 cases, giving an average mortality of 43.47 per cent.—*Lancet*.

Date of Operation.	No. of Case in Report.	Name of Patient.	Result.		Name of Operator.	Cause of Death, &c.
			Recovd.	Died.		
January 25th .	1	Caroline C.	1	—	Dr. Meadows	
March 29th .	3	Emma S.	—	1	"	Colloid degeneration ; peritonitis.
April 26th . .	4	Harriet A.	1	—	"	
May 3rd . . .	5	Mary L.	—	1	"	Very broad pedicle ; peritonitis.
August 6th . .	10	Sarah D.	1	—	"	
November 1st .	14	A. W.	1	—	"	
November 15th	15	E. K.	1	—	"	
December 6th .	17	J. G.	—	1	"	Adenoid cyst ; ascites ; general peritonitis.
December 22nd	21	Sarah B.	1	—	"	
December 27th	22	C. S.	1	—	"	
—	—	—	7	3	—	
February 1st .	2	Jane H.	—	1	Dr. Heywood Smith	Large suppurating cyst ; exhaustion.
May 10th . . .	6	Alice C.	1	—	"	
August 2nd . .	9	Jane J.	—	1	"	Suppurating dermoid cyst ; peritonitis.
October 25th .	13	H. H.	—	1	"	Peritonitis and exhaustion.
November 15th	16	Mrs. W.	1	—	"	
December 6th .	18	C. E.	1	—	"	
December 13th	19	L. S.	—	1	"	Peritonitis.
December 16th	20	A. G.	—	1	"	
December 20th	23	Sarah L.	—	1	"	Death 2 months aft. operat. from malig. disease.
—	—	—	3	6	—	
May 24th . . .	7	Maria W.	1	—	Mr. Scott	
July 12th . . .	8	Emily G.	—	1	Dr. Edis	Malignant disease of pelvic viscera.
August 6th . .	11	Mary A. M.	1	—	Mr. Heath	
August 19th .	12	Maria R.	1	—	"	

Pediatric Summary.

Contribution to the Study of Trismus Neonatorum.

By A. STADFELDT, M.D., Professor of the Obstetrical Clinic of Copenhagen.

Dr. Stadfeldt, at the outset of his paper, expresses his surprise at the remarkable diminution of the disease which he has noticed of late years. He gives a statistical account of the disease for twenty years. He does not consider the question of pathogenesis, but merely that of hygienics. He says, however, *en passant*, that his experience is opposed to the view that disease of the umbilical vessels is the cause of trismus neonatorum. He gives an account of 93 cases of the disease, all of which were fatal. These were met with in 20,806 births. He thinks that the statistics show that the sex of the children does not present any particular disposition to

trismus (the numbers being respectively 51 boys and 42 girls), and that the same may be said with respect to the duration of labour.

The tables show that death occurred in more than half the cases on the seventh or eighth day after birth, the day of death varying in the other cases from the fourth to the twelfth after birth.

The tables go to show that the children born in the Maison d'Accouchements are much less frequently affected with trismus than those born in the Maison Affiliées, a result which is the reverse of what would *à priori* have been expected. Dr. Stadfeldt rebuts the assertion, that trismus neonatorum is more frequently met with in puerperal epidemics than when such epidemics are absent, and appeals to his tables in support of this opinion. These tables show that the mortality was higher amongst the lying-in women occupying the Maisons d'Accouchements, than in those occupying the Maisons Affiliées.

In Scandinavia the disposition to trismus neonatorum is least in winter, and greatest in the months of August and September.

It appears that several of the cases occurred in five of the affiliated houses—*i.e.*, private houses of persons who undertake the care of lying-in women—each having two patients, and it further appears that these beds were pretty constantly filled, and that the hygienic surroundings were not good. But it must not be lost sight of, that trismus seemed to attend the practice of the women who had charge of these houses. Dr. Stadfeldt thinks the malady may be contagious, and that probably there exists a specific contagion for the disease. The question of treatment is not entered upon.—*Archives de Tocologie*, Juillet, 1874.

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

“The Means employed at the Preston Retreat for the Prevention and Treatment of Puerperal Diseases.” By William Goodell, M.D. Philadelphia, 1874.

“Intestinal Obstructions: a Safe and Ready Method.” By Robert Battey, M.D. Atlanta, 1874.

Communications have been received from Dr. Fr. Eklund, Stockholm; Dr. Heywood Smith; Dr. Meadows; Dr. Routh; Dr. Wiltshire; Dr. Owens; Dr. Wagstaffe; Mr. Lawson Tait; Dr. Gervis; Dr. T. Chambers; Dr. John Williams, and Dr. Ross Jordan.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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Original Communications.

ON SOME POINTS CONNECTED WITH THE
ETIOLOGY AND TREATMENT OF CARUNCULÆ OF THE URETHRA IN THE FEMALE.

By C. H. F. ROUTH, M.D.

Senior Physician to the Samaritan Free Hospital; Fellow of University
College, &c. &c.

CARUNCULÆ of the female urethra, or tumours of the orifice of the urethra, constitute a not unrare disease, and several monographs have been written upon it. Sharp, Hughes, Blomfield, Burford, Norman, Sharp, Warner, Jenner, Sir E. M. Clarke, Safford, Lee, Wardrop, Velpeau, Rosenmüller, &c., have all referred to them in valuable articles on the subject.

It is no part of my object to enter into the historical account of the disease, but only to notice a few cases which have come under my notice, together with a reference to the treatment which I have found most successful.

The disease is usually confined to the external meatus urinarius, and here we observe on opening the labia little extremely red, mulberry-like growths of various size, from a pin's head to the size of a hazel nut, growing round the opening. The *consistence* varies a good deal, sometimes being pulpy and breaking down readily, sometimes being somewhat indurated. Although confined generally to the external orifice of the urethra, they may extend all along

the urethra, but frequently their presence is confined to the external and internal meati only. Most often they bleed on the slightest touch, but not invariably. They are frequently the seat of exquisite pain, and in some instances this symptom is so acute that the patient's life becomes a misery. Micturition is agonizing, and the whole appearance of the patient is so shattered and broken down that we are apt to suspect serious organic disease. These *carunculæ* are indubitably sometimes the point of origin of the spasm in vaginismus, so that it effectively prevents all conjugal relations. At other times, however, there is no pain whatever experienced, so that the existence of the disease is not suspected until an examination for some other purpose is made.

In every case, however, the growth itself is insensible. It is the mucous membrane on which it grows which is the sensitive part, and the absence of anything like nerve tissue to be made out by the microscope in the growth itself, explains this absence of sensation in it.

In some cases a muco-sanious discharge comes from them, and this is somewhat offensive.

Although the diagnosis of this disease is by no means difficult, it frequently escapes observation, and in some cases the distress experienced is so terrible as to make life most miserable. The case mentioned by Mr. Allan, of Epsom, is an instance in point. This patient could not sleep at night from the agony. A fortnight sometimes will suffice to develop this condition in a patient, so acute does the pain become, and so constant. Like the occasional suffering induced by a fissure in the rectum, it seems to involve, as by sympathy, so many neighbouring parts, that the patient's condition becomes one of the most uncomfortable. The following is an example of this kind.

CASE I.—E. S., aged thirty-three, was a patient of mine in 1859. She was short of stature, slight make, dark complexion, living in a dry and healthy part of Hammersmith. Generally a healthy woman; married sixteen years; had seven children, six living; in good circumstances of life. Catamenia first appeared at fourteen; always regular; duration four days, interval four weeks.

Only about three weeks before I saw her, she began to suffer from dysuria, which rapidly became intense, and of a forcing character. The pain was, however, unaccompanied by a desire to micturate, although when she did so it was veritable agony. She was also unable to stand up, even for a very few minutes, without experiencing the most terrible cutting pain in the urethra. She had obtained medical advice, but without any relief.

Her appearance was peculiar: countenance remarkably expressive of distress and anguish; face pallid; eyes sunken; much depression of spirits; altogether broken-down in appearance, and apprehensive, as if something dreadful were about to happen.

On examination I found within the urethral orifice a small vascular tumour, exceedingly sensitive on touch, and readily bleeding. The urethra having been dilated by a piece of curved wire, the tumour was removed, the edges being touched by lunar caustic. All pain ceased the next day, and she has continued well ever since.

Velpeau has stated that these growths are occasionally hidden within the urethra, high up, and in this manner escaping observation, they are very apt to be confounded with disease of the cervix uteri. Mr. Norman has also shown that the whole length of the urethra is liable to these growths. The following case is an evidence of mischief produced by a hidden growth high up the canal.

CASE II.—Mrs. J. S., aged sixty, became a patient of mine in 1859. She was a large heavy-looking woman, of a bilious temperament, a charwoman by occupation, but unable to work for the last thirteen years; inhabits a close locality near Edgware Road. Married fourteen years; has had six children and one miscarriage; the labours were easy, but the recoveries tedious. Has suffered from slight procidentia. Her means of living have been restricted, so that she was only able to afford meat once a week. She thinks, however, that until lately she had been growing stouter. Catamenia began at fifteen, regular, duration three days. Present attack began twelve years ago, with considerable heat and burning

at the orifice of the urethra. This lasted eight years, giving her great discomfort and pain, and then the affection disappeared suddenly, without treatment. Within the last month, however, a recurrence of the former symptoms has come on—scalding, intense burning at the meatus, with considerable itching and swelling of the external parts. Uterus normal in appearance and size. No leucorrhœa now ; occasionally a little. On dilating the urethra a large vascular tumour about the size of a marble became visible about a quarter of an inch up the passage, exquisitely tender. A suppository of 5 gr. of pil. saponis cum opio was placed within the urethra. This gave very little relief. The parts were therefore dilated next day, and the growth removed with a pair of scissors. A good deal of bleeding followed, which after a time was checked by the tincture of steel applied to the cut surface. The pain in micturition, however, did not disappear, and an alkaline mixture with belladonna was given, but was very little bettered thereby. Three days therefore after the first operation the urethra was again dilated, and by the aid of a small urethral speculum which was pushed within the bladder, quite at the distal end of the urethra, another vascular tumour was brought into view. This was excised by the scissors, and the tincture of steel applied to the cut edges. All symptoms ceased from this moment, although, as a precautionary measure, a third dilatation was made a few days later, but no further growths were discovered.

Here was a case of concealed growth, then, in the upper part of the canal. The case is also interesting as exemplifying the occasional disappearance of these growths without any treatment at all, to which I shall have again occasion to refer (Case V.).

The following is another example of a concealed growth high up the canal, although complicated with uterine symptoms, but I give the case as I have it :—

CASE III.—M. A. H., married five years ; no children ; has been ailing for about three years with what she believes is uterine disease. Was first of all admitted into this hospital in November, 1858, with congestion of the uterus, partial

retroversion, and vegetations. She was first attacked with leucorrhœa, and itching of the pudenda, about three years since. This has continued ever since, with very little intermission. There has been also occasional pain, chiefly in the back, occasionally increased during the catamenial periods ; constant *ardor urinæ* ; occasionally incontinence of urine. Catamenia first began at fifteen or sixteen : duration seven days ; interval five weeks. When admitted, in November, 1858, these catamenial pains were very intense, bending her double as it were, till the flow was established. On an examination being then made, a large and heavy uterus, slightly retroverted, and to the right side, with a very much congested os, was discovered, which was also very tender. She was leeches, locally blistered, and salivated, after which astringent injections were given, under which treatment she improved considerably. On her admission in July, 1859, she complained chiefly of pain in the neighbourhood of the urethra, much suffering on micturition, with considerable discharge, but especially confined to the external pudenda, which are red and very painful, the skin in the neighbourhood being likewise red and excoriated. The extreme tenderness of the parts rendered the use of chloroform for examination imperative. Having been placed under the influence of this agent, the urethra was dilated in the usual manner, and several small vascular tumours were found in and about the entrance of the urethra, and removed, the tincture fer. mur. being applied to the bleeding surfaces. She left the hospital four days afterwards, very much relieved. On the 29th August she was readmitted with the same symptoms, only that the breasts were painful, and that there appeared to be very much more leucorrhœa, which stained her linen and excoriated very much the external parts. She was freely purged, and put upon an alkaline mixture. The symptoms, however, did not appear to yield, the pain during micturition recurring. It was thought therefore prudent to make a further examination. The urethra was consequently again dilated under chloroform, and another vascular tumour about the size of a pea, and higher up in the canal, close, in fact, to the bladder, was discovered. This was removed and

treated as before, but a good deal of pain and inflammatory action followed, needing the employment of fomentations and morphine suppositories. Ultimately, however, all these symptoms subsided, and the patient left cured.

The following case is an example of these growths following an operation for constricted urethra ; the urethral pain being in the first period of the case due to this constriction, and subsequently to a large caruncular growth.

CASE IV.—M. H., aged fifty-three, came under my care in October, 1866. This patient was first seen in January, she was then labouring under great urethral pain. To touch the part brought on the most severe agony. The introduction of the finger into the vagina was insupportable. An attempt was made to pass a catheter, but it was impossible ; she was put under chloroform and the vagina then admitted readily a middle-sized speculum, but even under the full influence of the anesthetic, the passage of an ordinary-sized female catheter was not possible. A very small one, however, was readily introduced into the bladder.

The urethra was now divided on each side, top and bottom, by the hysterotome, about an eighth of an inch, and the aperture kept patent by a sea-tangle tent, which could only be borne for two or three hours. For a few days, however, it was repeated for one or two hours daily. From this time all local pain gradually subsided, and she left me cured. In October, 1866, as before stated, she returned, but in great local pain ; she stated she had continued very well for three months, and then the under surface of the urethra began to enlarge and became very painful, and although she had taken a deal of medicine, no relief followed. From her own feelings in the part she was satisfied that something was growing there.

On examination it was found that the under surface of the urethra was much enlarged, swollen, and painful on touch. At the opening of the urethra a hard fungous growth about the size of a shilling, two lines in thickness, and irregular at the circumference, was growing, closely resembling a cauliflower excrescence. The urethra itself was patent, the pas-

sage of a sound was not accompanied with pain. When pressure, however, was made against the growth, or it was allowed to fall against the vaginal wall in the erect position, it gave great pain. In the fear of great hemorrhage following the excision, the mucous membrane on which the growth grew was transfixed and two ligatures applied. One of these came away four days after, the other the next day. But the parts sloughed considerably. Iodine lotion was applied first, and later, tincture of steel in water. The pain persisted for a few days till the parts had healed, then ceased altogether, and she left me quite cured. She has continued well with no appearance of recurrence of the affection.

CASE V.—The following is a case which, although complicated with some uterine affection, yet presented some symptoms which might have been referred to the presence of stone in the bladder.

Mrs. J. T., aged thirty-one, was admitted under my care in 1859. She was of middle stature, dark, but very pallid face, lips blanched. Had been married five years, and had two children. Had lived in London four years. Parents healthy; she herself was quite well up to five years ago, from which period she dates her present illness. Although weakly she was always able to resume her work a month after each confinement. After the birth of her last child, however, she noticed a yellow discharge from the vagina accompanied with great pain in micturition, and a forcing-down sensation. She also noticed herself at such times that a small tumour about the size of a large walnut appeared without the vulva, but it returned by itself after about a fortnight's time. The other symptoms persisted for three months, then ceased and reappeared four months ago—namely, the vaginal discharge, dysuria, a forcing and bearing-down pain, particularly over the urethra, sacralgia very intense, and no relief following from the sitting or recumbent positions. When she makes water it seems sometimes during the flow, to stop suddenly, and there is occasionally blood in the water passed, especially towards the end of the act. She has been under treatment for some time, but derived no benefit.

Present State.—Pale, looks very ill, very weak, no appetite, dirty tongue ; has an unhealthy-looking varicose ulcer on the outer side of the left leg ; catamenia regular, began at fourteen, then ceased for five years ; much dysmenorrhea, interval three weeks, duration one week. *Examination* :—Urethra tender on touch, much congested, considerable tumefaction of the parts around it ; a small caruncle to be seen, which is exceedingly painful, just within the orifice of the urethra. It seemed scarcely credible so small a growth could give rise to all the symptoms complained of. She was therefore carefully sounded for stone, but none was found. The bladder was filled with water without inconvenience. The uterus was found to be congested and there was an abundance of leucorrhea.

Four days after catamenia occurred, accompanied with a good deal of local pain, and also in the ulcer in the leg. This last was relieved by water-dressing. She passed a good many clots during the period, which lasted three days and then ceased. Another examination of the urethra was then made. A small papilla was brought into view within the urethra by means of a bent wire, and snipped away with the scissors. Except a little *ardor urinæ* for a day or two, no further urethral symptoms remained. By way of precaution the uterus was leeches once and she left cured.

I have stated that in Case II., after suffering for eight years, the symptoms of *carunculæ* of the urethra entirely disappeared without treatment. I had occasion to verify this in another case.

CASE VI.—Mrs. S., a fair woman, aged about fifty, exceedingly stout ; had been a patient of mine for years. She was a *bon vivant*. Had suffered from piles, and stone in the kidney for some years, but latterly these last symptoms had become quiescent, and she now complained of intense pain in the region of the urethra. Micturition was excessively painful ; walking very uncomfortable, forcing and a burning pain extending round about the pudenda. Her extreme obesity rendered an examination of the urethra exceedingly difficult. However, I found projecting from within the

meatus there were several growths, more or less fungoid, varying from a $\frac{1}{4}$ to an inch long, exquisitely tender on touch. I advised their excision, but my *bon vivant* would not submit. I left town, hoping on my return to operate, but it was months before I again saw her, and then to my surprise I found all the growths had disappeared. Except perhaps more regularity in her mode of living, which was scrupulously enforced by an attendant, and greater local attention to ablution, nothing was done and yet the growths disappeared completely. This case is very suggestive as to the etiology of this affection.

I have met with another equally marked case where a similar origin to the disease could be traced.

CASE VII.—Mrs. R., aged thirty-nine, living in the country, consulted me for intense dysuria. The agony in passing water was intolerable. There was a desire frequently to micturate, but she dreaded doing so in consequence of the pain. She had never passed blood. The disease had been very much on the increase the last three weeks—in fact she felt perfectly wretched from the pain. My patient (whom I had known in former years as an active, spare woman) was now become extremely fat and corpulent. Collops of fat hung round about her, so much so as to make examination by no means easy. Her mode of living was peculiarly gross. Meat and eggs at breakfast; dinner at one, including meat and very extensive quantities of porter; tea at six with muffins, crumpets, &c.; supper at night—repetition of dinner. Of all, as she told me herself, she partook abundantly and freely. Occasionally there was a glass of spirit and water by way of nightcap, and all this without exercise to work it off. I did not make any very special local examination at first, being desirous of trying the effect of alkalies, purgations, and even copaiba capsules, but even after ten days no improvement followed. Then it was I examined the urethra carefully, and found one of these growths present. I cut this, and let her bleed freely, being in no haste to arrest it with the nitric acid. The effect was marvellous. All the symptoms disappeared in a day or two, so that I was not

called upon to do anything more for her, except to advise Banting measures for the future.

Causes.—Are commonly stated to be any sexual irritation from whatever source ; and imprudent habits, frequent coitus, uncleanness, pregnancy, gonorrhea, are mentioned as causes, generally more commonly in operation in youth.

My own belief, and in this I am pleased to find Mr. B. Norman concurs, is that these venereal influences have been exaggerated. I do not find the disease so common among prostitutes as among middle aged married females, and I have found it commonly absent in women of acknowledged imprudent habits. On the other hand, I have found them present in the most prudent, cleanly, and continent women, and have generally believed them to be chiefly produced by an acid and irritant quality of the urine, especially in cases of rheumatic diathesis ; as if a small quantity of urine remained about the external meatus, and irritated the mucous membrane, so that a caruncle was developed. In others it seems to be due to sedentary habits, and indulgence of the pleasures of the table. In case No. 6 it seemed to be more regularity in these respects that brought about the natural cure. In case No. 4, the irritation following the free incisions made to enlarge the urethra was probably the cause of their production.

The influence of age has also, I think, been exaggerated. It is stated to be most frequent among younger women. My experience would be the exact opposite, and it is remarkable how many cases of women above thirty are recorded by those who have written on this disease.

On one or two points only in regard to the treatment to be followed in these cases would I venture to remark, and these refer to the occasional incontinence of urine which follows, the occasional danger of the tincture of iron, and the mode of dilatation.

CASE VIII.—I have seen one case in which operation for the cure of *carunculæ* gave rise to incontinence of urine. She was a young creature aged twenty-two, short and stout, fair complexion. The early history was peculiar, as in no way

calling attention to the presence of this affection. About two years back she had suffered from leucorrhea. While occupied one day washing, and lifting up a heavy bundle of clothes, she felt something snap at the lower part of her belly. This was followed by increased discharge, severe backache and headache, which continued, only being aggravated before the periods by intense pruritus. She sought admission in a hospital, and was found to be suffering from *carunculæ* of the urethra. These were carefully removed. Incontinence of urine followed. When I saw her the vagina was large and long. The urethra was situated rather far back and puckered. An ordinary sound could not be introduced. More success was obtained with a fine probe, and then the urethra was found to be curved, not unlike two or three turns of a corkscrew in direction. There was great irritation of the bladder, indeed, a considerable amount of cystitis. No trace of any *carunculæ* remained.

The error possibly here was in cutting too deeply through the muscular tissue of the urethra. It points out the necessity of not cutting below the mucous tissue.

I have in several of the examples enumerated alluded to the employment of the tincture of steel to arrest the hemorrhage after excision. I am not sure if the practice is always safe. At any rate, I saw pyemic poisoning follow its use in a poor woman, and death in a couple of days. There was no want of care in the operator. He was a gentleman well known for his surgical skill, and being present, I could judge as to the mode of operation being exceedingly good. This it is that leads me to prefer nitric acid. If applied on a piece of pointed stick, the exact bleeding spot can be readily touched. But I believe that the very bleeding which occurs is often salutary. It relieves the local hyperemia, and often many of the distressing symptoms. Indeed, the case of Mrs. S. (No. 6) before alluded to, seemed to show that the disease had been produced by surfeiting on the good things of this world, while it is undeniable that such was the origin in case No. 7.

It may not perhaps always be prudent to allow this hemorrhage to proceed unchecked. Amadée Forget relates

a case where hemorrhage took place backwards into the bladder. This was finally arrested by compression against the symphysis pubis. Huguyer also states that Guersant nearly lost a case by similar hemorrhage, but in such cases pressure is so easily and simply applied, or the actual or galvanic cautery can be so effectually used on a piece of wire, that no such result need follow. But this free bleeding I have only recommended in those examples of epicurean women before referred to.

I have only to make a concluding remark on the mode of examination and dilatation. This is one of those cases where a patient must be placed on her back in the position for lithotomy. Sometimes the mere drawing asunder of the internal labia will reveal the nature of the case, or the dilatation of the urethra by a lady's hair pin, generally at hand, will suffice. But when we have reason to believe the growths extend higher up, then something more is required. Mr. S. Wells' india-rubber dilator is a very useful instrument. If it has an inconvenience, it is that it is apt to compress the growths and make them less obvious. But if, while the patient is under chloroform, whether we have begun by Mr. Wells' instrument or not, we successively pass different sized specula made after the fashion of anal specula with a fissure on one side, until we can pass one of the size of the little finger, this will suffice; and then with a fine pair of scissors we may snip the growths as they come in view on the turning round of the speculum. Where the growth is very high up at the margin of the internal meatus of the bladder, as in Case 2, it could not otherwise be made out. However the dilatation be made, it should be done at once and rapidly. Less mischief, as shown by Mr. Bryant, follows this plan, and the use of sponge or sea-tangle tents to bring about a gradual dilatation is a cruel procedure, and cannot be borne by most women.

REMARKS ON THE FORCE USED IN TRANSFUSION AND ON THE SELECTION OF FLUIDS FOR INJECTING INTO THE VEINS.

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THE following remarks were put together a year ago but not published. They are founded upon cases of transfusion in surgical rather than in obstetric cases, but the principle insisted upon—that of the use of a natural and determinable force—applies equally to all cases. The subject had occupied my attention for some time after seeing many cases of severe surgical hemorrhage from injury, and being then in charge of the surgical in-patients at St. Thomas's Hospital, as Resident Assistant-Surgeon, I had an apparatus made for me by Messrs. Maw and Son, upon the principles which seemed to me most advisable. Shortly after this an opportunity was afforded me of putting these principles to the test.

On April 28, 1872, a woman, Elizabeth A., aged twenty-five, was admitted into hospital with both legs crushed from a railway accident. She had apparently lost a great deal of blood before admission, and was bleeding when brought to the Hospital, so that no time was lost before operating. Both legs were amputated below the knee, but during the operation upon one limb the femoral artery was so imperfectly held as to allow of rather extensive hemorrhage. The arteries were twisted.

Before the operation she was sensible, but evidently suffering from the shock of the injury, to some extent modified by free use of brandy. The temperature was 98° , not low for the shock of hemorrhage. However, she had been brought about two miles to the hospital, and a good deal of brandy had been administered on the way.

After the operation the temperature was 96° , and she was so much collapsed that I feared she would die on the operating table; a tourniquet was therefore placed on each of the main arteries of the limbs after emptying the veins as much as possible by friction towards the trunk. She

became, however, so restless and cold, and her pulse became so feeble that I determined to transfuse, and opened the median basilic vein for the purpose.

Nearly six large teaspoonfuls of condensed milk were mixed with a pint of hot water and strained through muslin. This fluid was placed in the apparatus which I had had made a short time before, and this apparatus connected with the canula in the vein. Precautions were taken to keep the milk at the same temperature as it was at first made (100°).

On starting the stream the milk flowed readily into the vein, and for the greater part of the time the suction power of the vessels was sufficient to continue the flow; at other times a little pressure was employed by raising the apparatus six inches above the level of the veins. During inspiration the flow was rapid; when she was crying out there was some regurgitation of the fluid. A pint and a half was injected.

The effect produced immediately was to contract the pupils (they had been previously dilated and inactive), then they fluttered but soon they became normal in size and acted under the stimulus of light. The temperature in the vagina before transfusion was 97° (2 A.M.). After transfusion $99^{\circ}\cdot 1$ (4.40 A.M.) and one hour again after this, $99^{\circ}\cdot 8$ (5.40 A.M.).

When I left her at six A.M. she was sensible, talking reasonably but rather restless, and I anticipated that she would improve. It appears that about half an hour after this she became weaker, more restless, and sighing, but her temperature was apparently not much lowered, for the sister of the ward noticed that the skin was comfortably warm. She died a little before 8 A.M.

At the post-mortem examination the viscera were found healthy. In this case there appears to have been a combination of shock and hemorrhage, both to a serious extent, so that it is difficult to judge how far the case was one likely to be permanently benefited by transfusion. But seeing her condition after operation, and knowing that she had lost an unusual quantity of blood, I deemed it justifiable to transfuse. For some time I had determined to give milk a fair trial as a substitute for blood in transfusion, having seen the ill effects of the latter (the lungs blocked with pulmonary clots). The

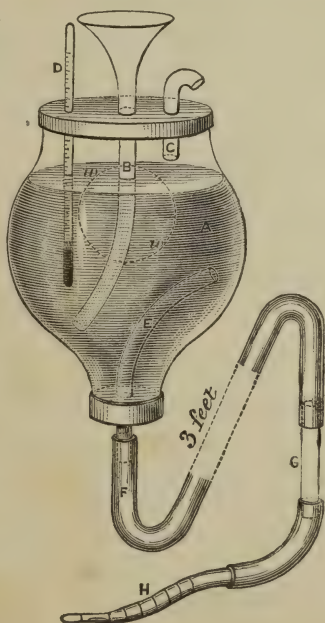
results of transfusion of milk were not in this case permanently satisfactory, but they were satisfactory to this extent, that the patient was revived for a few hours, and that no ill results followed in the way of pulmonary clotting. The case was not one of pure hemorrhage, and I am inclined to believe that the shock of the injury, plus the shock of the double amputation, was the cause of death rather than hemorrhage and its consequences.

The apparatus used consists of a glass cylinder (A) capable of holding about half a pint of fluid, closed above by a large cork, the under surface of which is coated with gutta-percha. Through the centre of this cork passes a tube (B), funnel shaped above, for receiving the fluid, and carried below to near the bottom of the apparatus and to one side. Another small tube (C) passes through the cork in order to allow of the escape of air from the cylinder during the filling of the apparatus. A thermometer (D) has its index projecting also above the instrument.

The lower end is closed similarly by a coated cork which is perforated by the outflow tube (E), starting from the opposite side to that of the termination of the inflow tube and a little above it.

To this is attached a tube of india-rubber (F) about three feet long and coated with cotton wool. Near the end of this tube is a small piece of double glass tubing (G), to allow of the current of the fluid being observed.

The nozzle (H), which is inserted into the vein, is probe pointed and has its hole about $\frac{1}{2}$ inch from the extreme point, so as to allow of its being partially withdrawn in order to



clear the hole if necessary without removing the nozzle. It is notched above to insure the ligature biting and to prevent its slipping.

The cylinder (A) is encased in a wicker or other frame which is packed with cotton wool,* but a window is left opposite the dotted lines (*w, w*), to allow of the height of the fluid being observed.

The principles upon which the apparatus just described depends, are—

1. That suction rather than artificial pressure should regulate the admission of the fluid.
2. That great precaution is advisable to prevent the admission of air with the fluid.
3. To prevent the admission of solid sedimentary or other foreign matter (or in case of Blood to hinder as far as possible the formation of coagulum).
4. That the amount of artificial pressure used should be capable of ready estimation.
5. That the temperature of the liquid should be indicated and maintained.
6. That the rate of flow should be known, and therefore the proper action of the apparatus determinable.

1. *That suction-power is preferable to artificial pressure.*—That this must be the case, if only sufficient to procure a flow, will be, I think, acknowledged by all, for such a force would be constant and regular in action, and not exposed to the objections which accompany an unknown and artificial pressure, such as is used in a simple syringe, or in Aveling's ingenious apparatus. The only question which arises is, whether the suction force is sufficient to promote the flow of fluid into the vein. It would appear from the case narrated above in which this instrument was used, that the suction-power in the vein was not sufficient to commence the flow, probably owing to the walls of the vein lying in contact with one another; or possibly to the presence of a small clot against the orifice of the canula, but that immediately this was dislodged by slight extra pressure, the flow continued regularly

* I have it now covered with india-rubber as more convenient.

for a considerable time. It must be noticed that no pressure whatever was used during the greater part of the time, but that when the flow became less active, during the latter part of the trial, pressure was made by raising the instrument a short distance (6 inches).

It is evident, therefore, that the suction-power in the vessels is sufficient in a case of collapse due chiefly to hemorrhage to maintain a steady in-take of fluid (to the extent of about a pint in this case) and that very slight pressure was sufficient to give a start to it, and also to increase the quantity taken in to about a pint and a half.

Now if the suction-power proves sufficient to maintain the flow in such a case as that described, the sole objection to the use of this means—that of possible insufficiency—must be disposed of.

2. It is needless to point to the necessity for extreme care in the use of any apparatus for transfusion, to prevent the admission of air. I have had the opportunity of seeing both instantaneous and slow death follow in cases where air has passed into the veins. In one case the femoral vein was opened, and death was almost immediate: in the other case the lingual vein was half divided, and death was slow, occurring in the course of about an hour. In both cases the blood in the right side of the heart was frothy. To avoid such an accident it is, I imagine, necessary that a transfusion apparatus should be made to work as continuously as possible; no parts of it should have to be removed to be refilled, &c., and the supply to it should be as constant as possible. These objections apply to a simple syringe, and also to the simple funnel, while they are avoided in the apparatus here described; that is to say, the cylinder being kept well supplied with fluid, never being allowed to be emptied below a certain line, there will be no possibility of air entering the vein while the vessel is kept upright, and the flow will be regular.

3. If artificially prepared liquids are made use of for transfusing, there is, of course, a possibility of sediment passing in with the fluid, and forming a focus for coagulation, or mechanically obstructing the passage of blood in the lungs. The risk of these dangers is to be avoided by carefully preparing the

fluid, straining it through muslin, and allowing it to stand a short time ; but to diminish the risk as much as possible, the outflow tube from the cylinder is made to come from a short distance above the bottom of the apparatus. By this arrangement, and by carrying the supply tube to the opposite side, and to near the bottom, the orifice of the outflow tube is also kept in fluid which is comparatively still, not thrown into a state of turmoil by the incoming fluid, and therefore less liable to receive foreign matters and sediment which might otherwise be stirred up.

If defibrinated blood be transfused, the dangers of coagulation would, of course, be almost entirely avoided ; but if fresh blood be used, the chief source of danger would be the formation of clots and the carrying off of these into the circulation. Now, whatever apparatus is employed, that portion of the blood which comes into contact with the walls must necessarily coagulate, since blood is coagulated by contact with a foreign body, as Prof. Lister showed in his Croonian Lecture before the Royal Society. Therefore, whether a syringe, or funnel, or india-rubber bag, or this apparatus be used, blood will clot against the surface of the instrument. But this is of comparatively little importance compared with the danger of detaching the clot. In fact, the formation of a thin layer of clot against the walls is the best preventive against further deposit ; for blood in contact with clot does not coagulate as readily as against any other foreign material that we are likely to use. What we have chiefly to consider is how best to avoid disturbing the clot when formed, and this can only be done by an apparatus in which there is a minimum of disturbance in the fluid. Such a condition cannot be found in a syringe or funnel, and in Aveling's india-rubber compression-bags the disturbance must be at a maximum.

4. It must at times be necessary to use artificial pressure in order to start the flow, and in order sometimes to enable the operator to supply a larger volume of fluid than will be sucked in naturally. It may be that a small clot forms at the orifice of the insertion tube, and has to be displaced. It must be displaced, if it be there, before the flow can com-

mence ; but cannot we diminish the risk of entire dislodgment and consequent embolism ? The force of a piston, or of the pressure of the hand on the compression-bag is an undeterminable one, and who knows what injury may be done by it ? But the pressure of a column of fluid is a determinable one, and, moreover, it is a steady one ; and it is quite possible that a clot, if formed, may be only partially dislodged, and allow the passage of fluid which was prevented until the apparatus was raised (as in the case narrated) to the height sufficient to allow of the amount of pressure necessary to overcome the obstruction.

There may be, I imagine, a source of obstruction to the first passage of the fluid in another condition. It may be that the vein above the point at which the instrument is inserted has collapsed, either from the pressure exercised during the operation or from the loss of blood from the system, or both combined, and I can understand the possibility of initiatory pressure being requisite for this reason. I would not exclude this as an explanation of what occurred in my own case above narrated. But after this initiatory pressure has been rendered unnecessary, and the suction-power of the vessels is sufficient to continue the flow, it would be irrational to keep on a pressure which is not wanted.

My objection to the ordinary apparatuses is especially in respect to this point. They employ artificial pressure, either entirely (as in the piston) or not at all (as in the communicating tube between two veins), and if entirely they do not provide the means of estimating the force used. It is difficult to estimate the harm which may be done by the employment of such rough means, and even with the greatest care on the part of the injector it is, I conceive, unlikely that ill results will be avoided. The pressure, if it be excessive, as it is almost certain to be, must distend the veins to an injurious extent ; an excess of fluid is thrown into the right side of the heart, which the pulmonary circulation, as it then stands, has not made way for, and rupture of veins, with over-distension of the right side of the heart, and consequent hindrance to its contraction, may follow. It was seen in the case detailed above that the flow varied with the respiration, a fact which is

familiar enough to physiological experimenters, and no provision can be made for this variation in rapidity when artificial pressure is given by means of a piston or a compression bag, but it is allowed of when the moving power is suctional, and even when the apparatus I have described is slightly raised, so as to give extra pressure.

In this instrument I have added only three feet of tubing, and therefore the means of giving pressure equivalent to about a pound and a half to the square inch, but of course it would be possible to increase the pressure to any extent by adding to the length of the tube. By lengthening the tube, however, the chances of cooling the fluid would be increased, and the case in which the apparatus was used led me to consider that more than this pressure would rarely be required.

5. In order to preserve the temperature of the fluid, whether it be blood or artificially prepared, the different parts of the apparatus must be enveloped in some non-conducting material, like cotton wool, and a thermometer in the cylinder indicates the actual temperature, which will, of course, be slightly diminished by radiation below; but certain parts must be left exposed, so that the progress of the current and the working of the apparatus can be properly under observation. For these purposes, a window must be left in the material enveloping the cylinder, and a piece of double glass tubing should be attached to the lower end of the india-rubber tube, and this can be connected with the insertion pipe by means of a small piece of protected elastic tubing, like that used above the glass. The great value of this glass tubing is to enable the operator to watch the flow of the liquid, and a clip can be placed on the india-rubber below it at any time, if necessary. The outer glass tube is in order to provide a coating of warm air to the inner, and diminish the amount of cooling by radiation.

There is a point with reference to the insertion pipe which is worthy of notice. In several cases I have found it advantageous to know exactly the distance to which the canula has been inserted, and have therefore had it marked at definite distances from the end, just as on the uterine sound. These markings are moreover useful in allowing the ligature

to hold the canula fixedly in position, without a risk of its slipping, and the bulbous end insures the tube not leaving the vein.

Class of Cases in which Transfusion is likely to be Serviceable.—Transfusion has been employed with beneficial effect in two kinds of cases. 1. Those of collapse from hemorrhage. 2. Those of collapse from loss of the watery and saline constituents of the blood, as in cholera. These two classes of cases are alike in the effects produced, but differ entirely in the cause, the first being mechanical, while the second is the result of the presence of a special poison. In the first, as seen simply in post-partum hemorrhage, or complicated with nervous shock in most cases of surgical hemorrhage, we should be led to replace the lost blood by more blood, for something more than the watery constituents have escaped. But with blood, as I have remarked before, special precautions have to be taken, and we are safer in avoiding the use of ordinary blood, provided other suitable fluids are obtainable. Blood, moreover, is generally difficult to obtain on a sudden emergency, and there is often, and perhaps generally, no time to defibrinate it. However, if blood be made use of, it should be deprived of its fibrin, in order to diminish the risk of embolism, and with the defibrinated blood should be mixed some material which has in it the elements necessary for not only immediately imparting warmth, but also sustaining the heat of the body.

In the second class of cases, where a great drain of fluid from the blood has produced collapse, as in cholera, we should be led to expect better results from simple saline injections into the veins; but do we find this? Experience proves the contrary, for the relief, though marked, is only transient; and the explanation of this is probably to be found in the presence of the poison still in the blood. It is not to be supposed that the repeated injections of warm salines will destroy this poison, nor is it likely that they will make up for the injury done to the corpuscles themselves, which must be looked upon as the active elements of change in the nourishment of the tissues. But these injections will give temporary relief by supplying the blood with fluid to replace that which is

lost, and by giving that warmth which the arrested healthy changes of nutrition have failed to maintain. Something more, however, is wanted, and this is undoubtedly the point to which our attention must be directed in preparing artificial fluids for transfusion. We have to find something which shall not only at once give warmth, and so relax capillaries, which, in the skin at least, are firmly contracted, and promote chemical change in the vessels and tissues; we have to find something which shall also give the means of sustaining that warmth. Such material must, I think, be looked for in one of these classes of compounds—the albuminous, the saccharine, or the oleaginous, or of course, in a combination of these. Given such a material we may reasonably hope for success, for if animal heat can be maintained by such artificial means, time will be given for the destruction or elimination of the poison producing the fatal symptoms. Transfusion of such material in this class of cases would effect this—it would supply fluid, it would supply immediate warmth, and it would afford the means of sustaining that warmth.

Character of Fluid Transfused.—The requirements for this fluid appear to be (1) warmth; (2) power of sustaining animal heat (by combustion in the blood, and especially in connexion with respiration); (3) miscibility with the blood already in the system without injurious effects, either mechanically, as by coagulation, or physiologically by what we may term poisoning.

We have especially to remember that the fluid must be readily procurable and simple, not requiring elaborate preparation. In cases where transfusion is resorted to there is usually no time to be lost, and if it be possible to employ satisfactorily some fluid which is to be found always at hand, it may be the means of preserving life. This consideration compels us to bear in mind two or three natural productions to the exclusion of artificially prepared fluids. Blood and milk are especially suggested, for one or other is sure to be obtainable—blood probably from some friend, or milk at all events.

Blood has been used effectually long before now, but there is no doubt a grave objection to it in the danger of

embolism from formation and detachment of clot from some portion of any apparatus. That danger is, however, reduced to a minimum by the use of the instrument I have described, since the fluid is maintained without unnecessary disturbance.

Blood may be of course prevented from coagulating by the addition of various salts, and it might be suggested that such a modification would afford a valuable material for transfusing. I should expect, however, that the amount of salts necessary to prevent coagulation would act detrimentally, either by promoting a too rapid osmosis, or by interfering with nutrition and normal chemical change, or by physiologically poisoning.

Blood, again, may be defibrinated, but this process is too long to make the use of this fluid generally available. Moreover, there are cases, as I have pointed out above, where something more than blood is required—an actual heat-supporting fluid, and in these blood alone must not be expected to do more than temporary good.

Milk appears to offer all the requirements of a fluid for transfusing. It may be passed in warm, and so give immediate warmth. Its composition is such as to anticipate it will maintain the heat of the body. It is, moreover, miscible with the blood without injurious effects ; in fact, it is possible, according to Ryneck, to cause the circulation of milk to the exclusion of blood in the frog, and not interfere with the vitality of the tissues. In the case narrated in this paper condensed milk was made use of, and purposely, for I considered that fresh milk was more likely to coagulate, and was more liable to possess impurities than the condensed. It may be interesting to notice here that condensed milk may be exposed to the air, even in a moderately damp cupboard, for more than a year without destroying its character. As soon as the surface is removed the condensed paste is to be found below, of course, usually more inspissated, but capable still of producing cream, on the surface of a solution which has been allowed to stand four-and-twenty hours. I do not mean to recommend exposed milk for such an object as transfusion, but if a solution be made of the ordinary condensed milk, so as to resemble new milk, it will be suitable

for use. It is advisable to strain the milk through muslin to get rid of any mechanical impurities, and then may be used either alone or mixed with other materials, such as blood, or defibrinated blood, or ammonia, if a stimulant be required, &c. We have reason to believe that the only constituents of milk are absorbed without special change, *i.e.*, as oily particles, in combination sometimes with albuminous material, but such is not the case probably with the soluble albuminous constituents of food. We should have, therefore, more hesitation in mixing with any transfusion liquid strained solutions of meat, egg, &c., not knowing what disturbance they might produce, or even how far the necessity for them was indicated. Milk contains a certain proportion of albumen (which is not got rid of by condensation), and it is by its other constituents, saccharine and oleaginous, especially pointed to as the appropriate fluid for transfusion.

Since writing the above, I have had an opportunity of seeing how far a mixture of blood and milk can be relied on as a non-coagulable fluid. Equal parts of freshly drawn defibrinated blood and warm milk (prepared by mixing condensed milk with twelve times its quantity of water) were put together, and used with the transfusion apparatus. The mixture passed readily, and no clotting occurred, and some of it was kept in an uncorked bottle for a week in hot weather (August, 1873) without decomposition or coagulation. The blood used was obtained from the arms of three dressers, who volunteered their services, in the hope of relieving a patient who had, however, gone too far for recovery. It was a case in which nervous shock had been very great in addition to extensive hemorrhage, but taken in conjunction with the first-narrated case, it was of some small value in showing that surgical hemorrhage with nerve shock is a much more serious condition than simple hemorrhage. There was no response to the transfusion in this case, though more than a pint and a half was injected. Seeing the results obtained in these two cases, I should feel inclined in another case to add ammonia to the material injected, in the hope, somewhat faint though it be, that the stimulant would rouse the depressed nervous system.

If transfusion is to be of any practical value, it must be ready of application, and both the apparatus and the fluid must be readily obtainable.

There is no reason, it seems to me, why each of these requirements should not be fulfilled. A jug standing in a basin of hot water to keep the fluid warm, a piece of tubing hanging out of the jug as a syphon, and fitted on a smaller tube, or a crow-quill, which is to be tied in the vein, constitutes all the machinery necessary ; the length of the tube and the height at which the jug is placed give the means for all the pressure required. For the fluid, if blood can be obtained so much the better, and let it be defibrinated and mixed with warm milk ; if not, let warm milk be used alone, or with some stimulant. Such apparatus and fluid ought to be readily applied, but this will depend on the sagacity of the operator and the worth of his assistants. Special apparatus will save time, but the probability is that it will not be at hand when wanted, and therefore impromptu measures may have to be used. If an apparatus be used, risks of injury to the patient ought to be avoided, and therefore an undeterminable force ought, I think, to be excluded if possible. By a simple apparatus like that which I have suggested, force, if necessary, can be used, but it is accurately determinable, every foot of height representing about half a pound of pressure.

IMPROVEMENT IN THE INTRA-UTERINE TREATMENT OF FLEXIONS.

By FR. EKLUND, M.D., Stockholm.

HAVING lately been assiduously occupied in studying the treatment of uterine flexions, and more especially of retroflexions, I would willingly fix your attention upon the improvement of the intra-uterine method by Dr. Amann, of Munich. Influenced by his report, "*Zur mechanischen Behandlung der Versionen und Flexionen des Uterus*," I have had made a stem of vulcanite, varying in length from $4\frac{1}{2}$, 5, $5\frac{1}{2}$, 6, $6\frac{1}{2}$, 7, $7\frac{1}{2}$ to 8 centimetres. After the uterus has been redressed by means of the sound, the stem must be

introduced in the uterine cavity exactly the moment that the sound has been withdrawn, as if to *surprise* the uterus. If a retroflexion has to be treated, one blade of Dr. Barnes' speculum is to be introduced, and the blade of the stem by means of the end of the speculum must be held fixed against the posterior vaginal wall (in antelexions against the anterior vaginal wall). Two tampons of cotton wool which can be withdrawn by means of linen strings are then to be introduced to the vaginal roof, and one more is to be placed quite beneath the stem. The tampons are to be soaked in a solution of tannic acid and iron in glycerine and water, and are to be changed after three days, and before the application of new ones, a vaginal injection is to be used.



My improvements upon this method are :
 —1st. That the stems are made of zinc, so that a galvanic or Faradaic current may be applied through the musculature of the uterus and its ligaments for the purpose of allaying pains, strengthening relaxed tissues, or softening those which are indurated.
 2nd. The zinc of the stems effects a favourable influence on the modified surface of the mucous membrane. And 3rd. The addition of iron is of the utmost importance as an antiseptic.

I have had and have incessantly great success from this method—not only palliating by it, but even completely curing uterine flexions. It is, however, too soon to-day to publish my cases.



APPENDIX TO NOTE ON THE PROPOSED TREATMENT OF FIBROID TUMOURS OF THE UTERUS BY PUNCTURE.

By ALFRED MEADOWS, M.D., F.R.C.P.

Physician-Accoucheur to St. Mary's Hospital; Lecturer on Midwifery at the School.

BEFORE concluding this "note," I may mention a fact which has more than once come under my observation, and which might seem at first sight rather to favour the suggestion of Mr. Cameron, viz., the extraordinary disappearance, whether by absorption or otherwise I cannot tell, of these tumours, which has sometimes resulted from the preliminary operation for their removal. The most remarkable example of this which I have met with occurred some years ago in the case of a young girl about twenty-two years of age, who had a large intra-uterine sessile tumour. In order to effect its removal, the os being quite closed over the tumour, I commenced the operative plan which I usually adopt by freely dividing the cervix, and detaching the tumour all round as far as the finger could reach. This detaching process was repeated two or three times at short intervals, with the object of so reducing the attachment of the tumour as to make, as it were, a kind of pedicle of the remainder, preparatory to its final removal by the *écraseur*. To my surprise, however, I found that after separating the tumour a good deal, it began notably to diminish in size; and, by means of ergot, which I usually give at this stage to effect, if possible, some descent and even partial extrusion of the growth, the uterus contracted firmly upon the now diminishing tumour, thus probably aiding in the process of starvation to which it was being subjected; and finally, at the end of about three months, the entire mass, which was certainly as large as a fetal head at term, disappeared.

I have never met with so remarkable a case as this again, but it is by no means the only one in which the same result has occurred in connexion with similar proceedings. My explanation of the fact is this—these growths derive their nourishment entirely from the plexus of vessels

that lie in the loose cellular tissue which surrounds them. In the detaching process which I adopt many of these vessels are of course torn through, and in this and other ways the nutritive supply is cut off; ergot also, by its well understood action upon the uterine muscular fibre, aids this process; and in this way the growth is gradually starved; it, in fact, dies of inanition, at least, that is the only explanation I can offer of a fact which I have again and again observed.

It must not, however, be supposed that there is any real resemblance between this and the process of puncturing with a lancet, as suggested by Mr. Cameron. No argument is needed to show their entire dissimilarity, nor does it seem in the least degree probable that the result so happily achieved in the one case will be forthcoming in the other. It is much more likely, I fear, that the punctures would prove to be so many points of irritation, which, in accordance with the old maxim, "*ubi stimulus ibi fluxus*," would be additional starting points of increased activity, and consequent growth and development,—to say nothing of the risk necessarily incurred in the case of all punctured abdominal wounds. For these reasons, I hope the proposed method of treatment will not be carried out, at least, in this country. Among the black races, where it is said these uterine fibroids are extremely common, possibly the proceeding might be tried with somewhat less risk, and on the principle *fiat experimentum*, &c.

Reports of Hospital Practice.

ST. THOMAS'S HOSPITAL.

REPORT OF THE OBSTETRICAL DEPARTMENT.

By HENRY GERVIS, M.D., F.R.C.P. Lond.

THE following report gives details of the work done in this department from Dec. 6th, 1871, to Dec. 3rd, 1872, and so includes the terms of office, as resident accoucheurs, of Messrs. Addy, Garton, Slater, and Palmer.

During the year 920 cases were attended ; of these 10 resulted in twin births, so that the total number of children born was 930.

Of the 930 children born, 892 were born alive, and 38 were stillborn, or 4·26 per cent. For the three preceding years the percentage of stillbirths has been 4·32, 3·5, and 4·75 respectively, in neither year reaching the number of 5 per cent., stated by statistical authorities as the more usual one.

Of the 892 children born alive, 464 were males and 428 females.

Of the 38 children born dead 24 were males and 14 females, or in the proportion of 170 to 100. In no year has the proportion been so low as 140 to 100, the proportion stated by Sir J. Simpson to be the usual one ; indeed, last year the proportion was as 180 to 100, and in the preceding year as 160 to 100.

Of the 38 stillbirths the following table gives particulars as to the character of the cases in connexion with which they occurred :—

Natural labour	6
Lingering labour	4
Premature labour	5
Shoulder presentation	5
Footling presentation	3
Breech presentation	1
Prolapsed funis	1
Breech with prolapsed funis	1
Contracted pelvis (delivery instrumental)	2
Placenta prævia	2
Accidental hemorrhage	5
Labour natural, but mother had been kicked in abdomen ten days previously	1
Labour natural, but child expelled with amniotic sac unruptured	1
Anencephalous monster	1
	<hr/>
	38

The proportion of deaths in connexion with cases of pelvic presentation is less than usual this year.

Out of the 38 stillbirths only 5 occurred in breech or

footling cases, and in one of these there was the complication of a prolapsed funis.

Of the 10 twin births, in 2 cases both the children were males, in 4 both were females, and in 4 one child was a male and one a female.

Of the 920 cases attended—

141 were 1st labours.	27 were 10th labours.
158 " 2nd "	9 " 11th "
131 " 3rd "	6 " 12th "
106 " 4th "	5 " 13th "
127 " 5th "	4 " 14th "
79 " 6th "	1 was a 16th labour.
57 " 7th "	
37 " 8th "	920
32 " 9th "	

Of the 930 children born, the following table gives particulars of the presentations :—

Vertex	889
Breech	12
Shoulder	8
Footling	6
Brow	4
Face : : : : : 2	2
Elbow : : : : : 3	3
Head with hand :	2
Head, foot, and hand	1
Head and funis :	2
Breech and funis	1
	930

The proportion of cases in which the breech presented is much less this year than last, and much less indeed than is the usual rule, only 1 in every 77 cases, instead of 1 in every 59, the average arrived at by Dr. Churchill, and accepted by Dr. Tyler Smith and other authorities.

The number of presentations of the upper extremity this year, on the other hand, has been exceptionally high. Among the 930 children in 11 the presentation was either of shoulder, elbow, or hand, independently of the three cases in which the hand descended with the head. This gives a ratio of 1 in every 84.5 labours, while the usual ratio given

by Dr. Churchill is 1 in 232. Taking face and brow presentations together they occurred once in every 155 births. Last year the proportion was 1 in 250.

Three maternal deaths occurred during the year, or '32 per cent. Last year the percentage was a shade higher—'36; in the year before, '32; an average rate of mortality which cannot but be considered favourable.

Of the 920 cases 842 were natural, 49 were abnormal, 20 were complicated, and 9 were both abnormal and complicated.

Of the 32 abnormal cases 12 occurred among *primiparæ*, and 20 among *multiparæ*.

Among the primiparous cases, in 7 the difficulty arose from a rigidity of the soft parts, complicated in 2 by the presentation being occipito-posterior. In 1 the rigidity was so considerable that it was found necessary to dilate the vulva by a hydrostatic bag before the forceps could be applied; and in a second, as the head was being extracted, it was requisite to incise the margin of the perineum bilaterally. In both cases any laceration was prevented. In 3 of the 5 remaining primiparous cases the difficulty was due to some error in the size of the pelvis, either at its inlet, outlet, or generally; and in the other 2 to some abnormality in the child, either a general excess of size, or a too great hardness as well as largeness of the head. Of the 20 multiparous cases, in no less than 7 the difficulty originated in an undue size and hardness of the fetal head, associated in 3 with an occipito-posterior position; in 5 in inertia uteri, and in 4 in contraction of the conjugate diameter of the brim; the 4 other cases were single instances each, of elbow presentation, brow presentation, rigidity of perineum, and descent of the hand and foot with the head.

Of the 12 cases in which there was some complication but 1 occurred in a primipara, and this was an instance of severe post-partum hemorrhage in which ordinary measures failed, and the iron injection had to be used. This was done, and the patient recovered without a bad symptom.

Among the multiparous cases in 3 there was prolapsus of the funis; in one of these the funis measured thirty-seven

inches and a half; the presentation was a vertex one, and the child was born alive, in the second the presentation was of the breech, and the child was stillborn, and in the third the arm presented, and the child was also born dead. Three were cases of severe post-partum hemorrhage; in one there had been some pre-partum hemorrhage, and on introducing the hand to remove the placenta its margin was found to encroach upon the cervical zone. Two were cases of pre-partum hemorrhage, in one of which there was the history of a blow received some short time previously, and the other occurred without obvious cause in a woman in labour with her thirteenth child. In both the hemorrhage ceased on rupturing the membranes. Three were cases of placenta prævia. In two, in which the head presented after the usual preliminary measures, the forceps were used, in one with a successful, and in the other with an unsuccessful result, as regards the child, but in both successfully as regards the mother. In the remaining case the shoulder presented, and podalic version was effected, both mother and child doing well.

Of the seven cases in which some abnormality coexisted with some complication, 2 occurred among *primiparæ* and 5 among *multiparæ*. In one of the primiparous cases the forceps had to be used for a contraction of the outlet, and after the delivery was accomplished the case was further complicated by the occurrence of severe hemorrhage; in the other the forceps had been used on account of the persistent inadequacy of the uterine efforts; and this same inertia continuing after the delivery, permitted an amount of hemorrhage which, continuing in spite of ordinary measures, necessitated the use of perchloride of iron injection.

The 5 cases occurring among *multiparæ* possess each such distinctive features, and are of so much interest, that any attempt at summarizing them would be unattended with benefit.

In addition to the case of death resulting from hemorrhage already detailed, we had one case of death from puerperal peritonitis, and one following the induction of premature labour.

General Correspondence.

DEATH FROM SYNCOPE TWO HOURS AFTER DELIVERY.

(*To the Editor of "The Obstetrical Journal."*)

SIR,—In the October number of the OBSTETRICAL JOURNAL a very interesting case of "Death from Syncope two hours after delivery" is recorded by Dr. George Myles, who also asks if you, or any of your readers, can give any insight into the case. Unfortunately, Dr. Myles has given very few details of the case; neither does he seem to have had a post-mortem examination.

I would suggest that the patient died from embolism of the pulmonary arteries. In Sir James Simpson's selected obstetrical works several cases are given of sudden death after delivery, though at a much later period (pages 542–551). Some years since I was called to see a woman who had been delivered by a midwife a few days previously, and who was said to be dying. I hastened to see the patient, and immediately diagnosed embolism. As nearly as I can remember the facts were that the woman, who was very poor and in a bad state of health, raised herself to take some gruel, became very faint, and vomited, and in a few minutes she was attacked with great difficulty of breathing, cold perspiration, feeble voice, &c. Stimulants were given, and everything I could think of was done, although I had no hope of her recovery. She died in three or four hours.

Post-mortem examination showed both pulmonary arteries blocked, the left one completely, and the right one nearly so, with firm round coagula coiled like worms in the vessels, and branching off into their bifurcations. In the case related by Dr. Myles no doubt the clots formed in the heart, and were afterwards driven into the pulmonary arteries by the power gained in some measure from the stimulants administered.

I am, &c.,

WM. ROSS JORDAN.

Moseley, Oct. 20th, 1874.

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OF

GREAT BRITAIN AND IRELAND.

DECEMBER, 1874.

PAUPER SCHOOL GIRLS.

IF any have unsatisfied philanthropic yearnings let them take up the third annual report of the Local Government Board, and read what Mrs. Nassau Senior has to say upon the education of girls in pauper schools. In this report are to be found difficult problems requiring speedy and satisfactory solution, stubborn facts calculated to assist those willing to undertake the task, and touching histories to inflame the heart, captivate the sympathies, and brace the will for laborious action. Under the present system, it appears that these little girls are being educated under conditions detrimental to their health and sadly ineffective as far as supplying them with the knowledge necessary for their success in life is concerned. Complaints are made that their food is not suitable, nor varied enough; that the air of their dormitories is bad and sickening; that they are morally contaminated by having to associate with degraded and wicked casual children; that they have not sufficient amusements and holidays; that those who endeavour to ameliorate their condition are snubbed by Boards of Guardians; that they are collected together in such numbers as to make anything like individual supervision utterly impossible; that never being able to earn or spend money, they have, when they leave school, no idea of its value, nor, in fact, of anything which can be bought; and that the result of their training is a weak and diseased body and a hard and ill-tempered mind. This does not by any means exhaust the list of facts which Mrs. Senior brings forward in support of her position; they are, however, more

than enough to establish her case and show that some such alteration as this noble-hearted and painstaking lady suggests is indubitably required. Two simple words embrace the whole of her scheme—Home and Mother. Instead of collecting the girls together in large numbers, she would have them boarded out singly among the families of the working classes. In this way orphans and deserted girls would be supplied with foster parents, from whom they might receive constant supervision, and obtain sympathy and that valuable experience in household matters which no system of public tuition can equally well supply. The idea is not a new one, for it has been in operation for some time, and proved to answer most satisfactorily. Of course plausible arguments may and have been raised against it, but the advantages hitherto appear to have outweighed them completely. It is found that the most affectionate relations are usually established between the girls and their guardians, and that this kindly feeling often lasts through life. In pure country air with milk and bread *ad libitum* these little maidens, well “mothered” and housed, grow healthy, tall, and strong. Under home influence, kindly sympathy, and watchful care, none of the ophthalmia, round shoulders, contracted chests, pale faces, and stunted bodies, often met with in large district schools, appear ; and when they become old enough to go into service none are rejected because their sight is bad, their tempers not good, or their bodies too weak and small. At the nearest school they receive their instruction with the other children of the parish, away from evil influences and bad examples. The system of boarding-out does not break down even in a pecuniary point of view, for it is found that a child can be kept by a cottager at a cheaper rate than by a Board of Guardians. The superintendence of these foster children is also a most important part of the plan, and here it is that those who have time and inclination may find highly satisfactory employment. The Boarding-out Committee selects the homes in which these girls shall be placed, visits them during their stay, and finds places for them when they leave. There is nothing in pauper blood to prevent them from developing phy-

sically, morally, and mentally to the same perfection as others of their class more happy in that accident of birth over which no one has any control. In a few years after leaving school these girls become mothers, and here we arrive at the point which interests us specially. As servants of reproduction, what sort of generative work can be expected from girls brought up under all the deteriorating influences of large district schools? What must the progeny be of the weak, deformed, unhealthy, and stunted creatures reared under the present system? It can be nothing but a repetition of themselves, a class of imbeciles unable to obtain a living—the perpetuation of an endless round of pauperism, expensive to ratepayers, disgraceful to society, and heartrending to every philanthropic spirit. We should be happy to see Mrs. Senior's Report published separately and largely circulated.

Notices and Reviews of Books.

The Management of Infancy and Childhood in Health and Disease. By HOWARD BARRETT, M.R.C.S., late Surgeon to the Poplar Hospital. Routledge. Pp. 627.

ONE might almost have supposed that books such as this one existed *ad nauseam*, that the world was fully enough supplied with "Guides to Mothers in the Management of their Children," &c.; yet that another was required only proves that the mothers of this generation, rich as well as poor, need a great deal of good advice if they would only rear their offspring without running any grave risks from preventable disease. This requirement has been most fully and ably met in the volume before us: there has evidently been very great pains taken, not only in the matter but in the manner of its arrangement, so as to render it eminently useful as a book of reference for those persons for whom it is specially intended,—emigrants, mothers living at a distance from medical advice, heads of houses who have

more brains than money, and medical men engaged in active practice. One main advantage of this book, which cannot, indeed, be said of all, is that, while for the sake of those who are cut off from medical aid, it gives directions as to simple remedies that may prove of great value, even to the saving of life, yet the advice that runs through the book, and invariably is put in the foreground in dealing with any disease is, "Send for a doctor." This, in a book written, perhaps, more for the public than the profession, is a token of a healthful tone, and makes us the more ready to give it our hearty recommendation. In the introductory chapter the author says, "A book of this kind, however complete and practical, is always a makeshift, but even a makeshift is vastly to be preferred to nothing—to ignorance, helplessness, injurious quackery, or the inactivity of despair ;" and we think Mr. Barrett may be congratulated on having produced a book—ever a difficult task—that has erred neither on the side of scanty information nor of imparting dangerous knowledge.

The book is divided into four parts. The first, one of the most valuable portions, is on the management of children in health so as to keep them so, and enters fully into the questions of food, clothing, washing, ventilation, light, exercise, and sleep. Part II. treats of the general management of children in disease, and contains besides some chapters on special subjects, as, *e.g.*, vaccination and teething, as well as some excellent remarks on nursing. Part III. is the medical department of the book, and is divided into fevers, constitutional diseases, and diseases of special organs ; and Part IV. contains the surgery, both of injuries and diseases. In addition are four useful appendices :—A. Various articles of diet for infants and children during health and sickness. B. Tables of weights and measures, notes on doses, and simple prescriptions for use in emergency. C. The composition of various patent medicines commonly in use ; and D. Statistics of the mortality of children. The arrangement of each subject is admirable. We open the book, for example, at Chapter II., on scarlet fever, under the division (I.) on Fevers of Part III. Medical diseases, and find noted

in order, "Medical Name," "Cause," "Varieties," "Is it infectious?" "Period of Incubation," "Symptoms and Progress," "Distinctions," "Prospects of the Case," "Mortality," "Nursing," "Treatment," and "Sequels." These headings are printed in distinctive type, and we may remark that altogether the "get-up" of the book does great credit to the publishers. It remains but for us to add, that as one of our chief objects is to lessen infant mortality, we heartily recommend Mr. Barrett's book to all whom it may concern.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, November 4th, 1874.

E. J. TILT, M.D., *President, in the Chair.*

Recto-Vaginal Fistula caused by a Zwancks' Pessary.

Mr. CHURTON related the particulars of a case where a patient, aged sixty, had worn one for two years. A rent large enough to admit two fingers existed at the time of the removal of the instrument. This closed up nearly entirely, without operative interference, in about two months.

Dr. ROUTH observed, the case cited showed how necessary it was to know how long such instruments should be retained. The time was nowhere laid down in works on gynecology. He himself had seen an instance where a globular pessary was retained for five years, and then had to be removed with forceps. He had known also of two cases in which Hodge's pessaries produced fistula. His rule was to keep them in for three months at the utmost, and then remove them for a few days before reintroduction, but usually he preferred six weeks.

Dr. ROGERS said that no matter how judiciously rules might be laid down in books for guidance of medical men using pessaries, they would not be observed by patients, partly from forgetfulness or misapprehension of the advice given, partly from nervousness and dislike to be frequently examined, especially when feeling pretty comfortable while wearing the instrument. On one occasion he had removed one of the old box-wood pessaries placed within the patient twenty years before by the President, Dr. Tilt. He had operated on other cases for removal of both Hodge's and Zwancks' pessaries, as also for fistula caused by them. He thought Zwancks' pessary a most useful instru-

ment if removed every night, and its use discontinued for a time if necessary.

Dr. CLEVELAND thought that as it was improbable that a pessary would suddenly make its way through the vaginal wall into the rectum or bladder, the best rule of practice would be to direct the wearer of an instrument to present herself as soon as she experienced any unusual irritation or pain therefrom.

Dr. HOPE mentioned a similar case that had occurred to him in the out-patient department at St. Bartholomew's, where a large vesico-vaginal fistula existed as a result of wearing a Zwancks' pessary for fourteen months.

Dr. BRUNTON thought the cases were so interesting they ought to be put on record. He had no personal experience of such himself.

Dr. EDIS alluded to a case where he had extracted with considerable difficulty a large ball pessary from a patient who had worn it for eleven years, the whole of the vagina being in a state of granular ulceration. In several other instances he had removed instruments imbedded in the vaginal walls that had caused more or less inconvenience.

Dr. TILT thought these cases should be noted in the Transactions as a warning to others.

Dr. WILTSHIRE mentioned a case which came under his care at St. Mary's Hospital, in which a Zwancks' pessary caused fistulous openings between both the bladder and the rectum. He thought that if a rule were laid down, it should not depend on time, but on the intervention of symptoms of discomfort, discharge, &c. He regarded gouty women as very intolerant of pessaries, incrustations rapidly ensuing in such persons. He thought every patient should have clear instructions given to her respecting these instruments, and that Zwancks' pessaries might produce dangerous symptoms.

Dr. GERVIS feared that Dr. Wiltshire's suggestion would not prevent all risk, as on more occasions than one he had removed a Hodge's pessary on finding ulceration of the vagina present corresponding with one or other of its bars, and yet the patient not conscious of any inconvenience, and complaining only of some leucorrhœal discharge.

Dr. PALFREY remarked that there was often great trouble without many symptoms. In one case, eighteen months after the introduction of a pessary there was a sudden gush of urine, from the pessary having forced its way into the bladder. The patient denied all previous symptoms. He made it a rule with hospital patients to have them removed once a month by the nurse, who then employed the douche, and if no harm had resulted, the clerk reinserted the pessary. He considered the old-fashioned Hodge very bad, Dr. Greenhalgh's modification being a great improvement. He regarded Zwancks' pessary as very dangerous.

Dr. HAYES referred to a case he had brought before the Society where a Hodge had become imbedded in the vaginal wall.

Six Months Fetus.

Dr. CHARLES CARTER exhibited a fetus born 172 days, or twenty-four weeks and four days after marriage. The patient, aged twenty-six, was married on May 3rd, 1874, menstruation ceasing the last day of April. There had been a coloured discharge for one day at the usual time in the month following. Delivery took place prematurely on October 22nd. She had never experienced any fetal movements. The fetus weighed 1 lb. 6 oz., was 12 inches long, of a dark-red colour, with abundant hair on the head and down on the cheeks. It cried loudly several times, passed meconium of a greenish-black colour and urine whilst being washed, and lived for twenty-one hours; a little milk and water was given to it during life. The nails were well formed on the fingers, reaching almost to the ends. The eyelids were agglutinated together; on tearing them open the pupillary membrane was distinctly seen. The right lung was perfectly expanded, but only the upper lobe of the left. The testes were lying midway between the kidneys and the internal ring. There was a centre of ossification in the os calcis, but none in the astragalus; centres of ossification also existed in the first three pieces of the sternum. The fetus was not more than six months old, if so far advanced.

Dr. ROUTH thought it was important that the case should be carefully investigated. No points of importance seemed to have been omitted in the account—viz., the commissures of the brain and the *valvula conniventes*.

Dr. BRODIE mentioned that he had lately met with a similar case. A lady was confined at the end of six months and a week; the fetus was living, and cried well; it swallowed with little difficulty, and lived five hours.

Dr. WILTSHIRE also mentioned a case of twins at the fifth month, where one lived three or four hours, the other twenty-four hours.

Dr. CLEVELAND hoped that every means would be taken to ascertain the precise date of conception, as the main interest of the communication depended upon that point. Certainly the date of marriage, although of great value, was not always to be relied upon as preceding that of conception.

Dr. BARNES stated that in these cases he did not find the lungs completely expanded. As to the reputed age, he remembered an anecdote of the elder Rigby, who said that he had often met with instances of well developed children born within seven months of marriage, but only with the first.

Structure of the Decidua in Cystic Degeneration of the Chorion.

Dr. HOGGAN demonstrated this by means of several microscopical specimens, prepared by Mrs. Hoggan, M.D., from a case of miscarriage at the end of the sixth week, under her care, with explanations by her. The decidua caduca was seen to have no connexion with any hypertrophy of the uterine mucous membrane (if such exist),

but that it was really a typical specimen of embryonic tissue formed probably by exudation, and at this stage of growth the embryonic cells, imbedded in intercellular substance, had scarcely begun to differentiate themselves into the future tissues; enough progress had, however, been made in the cells forming themselves into rows, as to show development to be proceeding. The cystic degenerate ovum was of the size of a hazel nut, covered with villi, and imbedded in decidua, which were destroyed in dissecting it out. The cyst wall was treated with silver, but nothing but fluid was found inside. Endothelium was seen in different stages of growth, which seemed most active where the largest villi formed a sort of pedicle for the cyst; in the same field of the microscope could be seen the separate embryonic cells on dark-ground substance, passing by growth and junction into the so-called lymphatic *lacunæ*, and these again passing by vacuoles into the regularly-shaped endothelium cells lining the cyst walls.

Dr. MADGE inquired whether the villi of the chorion were examined. Death was due probably to changes taking place in these.

Rat-Trap Forceps.

Dr. HEYWOOD SMITH exhibited two new pairs of forceps to aid in the removal of growths, &c., from the uterus, or to be used as vulsella during ovariectomy. One was similar in construction to the ordinary pile forceps, the other pair were constructed specially for the removal from the uterus or vagina of large fibroid tumours or polypi after they had been detached. They were made in two parts (as midwifery forceps), and when in position could be locked. The inner surface of the blades was armed with teeth pointing towards the handles, rendering their introduction easy, and their slipping difficult.

Dr. MEADOWS thought the forceps were likely to be of great use. On two or three occasions he had been obliged to leave the tumour in utero after detaching it, as he could not extract it for want of suitable forceps, the cervix not being sufficiently patulous to allow of digital manipulation.

Dr. PALFREY confirmed Dr. Meadows's experience. In a recent case of a large fibroid, a firm hold by Dr. Marion Sims's new hooks was obtained, and all the attempts to withdraw the tumour were vain, and at last Dr. Barnes's long forceps were employed. There was one defect in Dr. Smith's forceps, they did not lock in the handle.

Dr. WILTSHIRE asked why in such cases as Dr. Palfrey alluded to, those in which removal of an already separated fibroid was impossible on account of its large size, the tumour could not be cut up into small sections by means of the wire *écraseur*.

Dr. GERVIS stated that he had on several occasions adopted the plan referred to by Dr. Wiltshire, and with complete success. Finding after severing fibroids from their attachment that they were too bulky to be drawn through the cervix or the vulva as the case might be, he had divided them transversely with Weiss's *écraseur*, and found

their removal then sufficiently easy. He could recommend this plan as preferable to such prolonged traction with forceps as spoken of by Dr. Palfrey.

Membranous Dysmenorrhea.

Dr. ALFRED MEADOWS exhibited a specimen of the membrane passed in a case of so-called membranous dysmenorrhea. Remarking upon the intractable character of these cases, he invited the opinion of the Fellows of the Society on their pathology and treatment.

Dr. AVELING believed the membrane exhibited was the nidal decidua or lining of the uterus which is periodically shed, increased in thickness and toughness by hyperemia of the organ. He had ventured to call this hypernidation. Mercury had been found to prevent this abnormal condition during the time of its administration. The rational remedies were those which reduced the supply of blood to the uterus.

Dr. HAYES inquired what appearances were presented under the microscope.

Dr. WILLIAMS inquired whether any trace of glandular tissue had been noticed; he had examined several and found it present. Fatty degeneration of the lining membrane took place before the catamenial period, the tissues around were injected but the uterus was not enlarged. Though mucous shreds were passed, the condition was due to an altered condition of the uterus itself; it was not congested, but was analogous to some skin eruptions, and was not the product of inflammation. Chlorate of potash had been tried, points of this substance being left in the uterus, which cured it for the time.

Dr. MADGE remarked that Dr. Williams spoke of the mucous membrane lying loose; he would ask, what was the condition of the wall beneath?

Dr. WILLIAMS replied that it was the same as in the uterus when menstruation had nearly ceased.

Dr. BARNES thought there was no naked-eye evidence of glandular tissue. A lady medical student had brought him a specimen she had passed herself, remarking that she had read they only occurred where sexual intercourse had taken place; this had not happened in her case. He thought the membrane occurred in consequence of hyperemia, apart from gestation; the mucous membrane was not necessarily shed.

Dr. HOGGAN remarked it was easy to prepare a specimen and let the Fellows see for themselves whether it was an exudation or not.

Dr. HAYES inquired whether there were any traces of the Fallopian tubes in the mould of the uterine cavity that Dr. Meadows spoke of.

Dr. GERVIS could recollect no case of membranous dysmenorrhea in which extreme uterine congestion was not an abundant and probably antecedent condition, and the treatment that he had found to succeed the best strengthened this view. They were generally very tedious cases, but he had found local depletion by scarification and the

internal use of the bichloride of mercury together very frequently effect a cure.

Dr. RASCH alluded to a case where a complete cast of the uterus had been passed.

Dr. BRUNTON suggested that there might be an element of syphilis in these cases, as several Fellows had stated that the treatment which gave best results was mercury in some form.

Dr. HEYWOOD SMITH inquired if Dr. Meadows had employed the intra-uterine application of hyd. of pernit.

Dr. TILT stated that some years ago he had published some cases of this disorder. There was one point to which sufficient attention had not been paid: independently of the body of the uterus being the source of the disease, the irritation and congestive state of the cervix was due to the irritation set up by the attempt to pass the membrane. In one case it was followed by acute inflammation. In regard to treatment he had injected tincture of iodine in several cases, in two successfully. It was an important point to bear in mind the congestion of the uterus. As for Dr. Brunton's suggestion he had never heard it mentioned before, and did not believe it.

Dr. MEADOWS in reply expressed his dissent from the view that these cases are due merely to an active state of uterine hyperemia; he did not dispute that this condition existed in most if not in all of these cases, but there must be something more than this for uterine hyperemia was a very common condition, whereas membranous dysmenorrhea was a comparatively rare disease. He believed it was essentially a constitutional affection, not a merely local disorder. In regard to the theurapeutics he knew of no certain remedy: all those which had been mentioned and many more he had tried in the present case without the slightest success—iodine, mercury, iron, cod liver oil, local depletion, and other local remedies had signally failed. He believed that many of these cases were practically incurable.

Dr. AVELING and Dr. WILLIAMS were requested to report further on the case.

Cases of Retroversion of the Gravid Uterus.

Dr. GERVIS read a paper on this subject relating the particulars of two fatal cases, as also of a third which only just escaped being fatal. Dryness of the skin was a prominent symptom in all the cases and absence of any head symptoms. In the first case miscarriage occurred a few hours after reposition of the uterus and death on the following day; complete retention had existed for three or four days. In the second case, retroversion with retention had been present for a fortnight; six pints of extremely offensive bloody urine were drawn off; death ensued the day following reposition of the uterus. In the third case, retroversion probably took place three weeks before with retention more or less complete, micturition only being accomplished with much difficulty and straining in small quantities at a time; three quarts

of water were drawn off and the uterus replaced in the knee-shoulder position ; inability to retain the urine persisted for ten days, but the patient ultimately did well.

Dr. BARNES suggested that as at the late hour at which the paper had been read it was impossible to do justice to so important a subject it would be well to postpone the discussion to the following meeting of the Society.

Dr. CLEVELAND seconded the proposition and it was adjourned accordingly.

MEDICAL SOCIETY OF LONDON.

Case of Transfusion of Lamb's Blood in Pulmonary Consumption.

Related by the recipient, Dr. REDTEL, of Köhn, Prussia.

Translated and Communicated by Dr. C. THEODORE WILLIAMS.

In communicating this case to the Society I should state that it is extracted from a letter addressed to Dr. Frank, of Cannes, and placed in my hands by Dr. Frank to do what I liked with. As the subject of transfusion has been much discussed lately, and as the practice is growing in repute both here and in Germany, owing to the advocacy of Hasse, Aveling, Routh, Playfair, and others, I thought a translation and extract from it might be of interest to the Medical Society, especially as containing the personal experiences of a highly intelligent medical man of the phenomena of transfusion.

According to his own and Dr. Frank's account, he had been suffering for some time from well-marked symptoms of consumption, accompanied by high evening temperatures, night sweats, and well-defined consolidation of the upper left lung had been found. A short time before the operation, having suffered greatly from laryngeal irritation and some dysphagia, a laryngoscopic examination was made at Jena, and superficial abscesses were detected on the posterior wall of the larynx, and extensive redness and swelling of the right vocal chord.

Instead of undergoing ordinary local or general treatment, he determined to try transfusion at Dr. Hasse's hands. He writes as follows :—

“ On the 30th of June I travelled to Nordhausen, near Hanover, to Dr. Hasse, who has undoubtedly the greatest experience on the subject, and who had previously expressed his willingness to administer to me direct infusion of lamb's blood. The operation took place on the 1st of July, at 4 P.M. And first I must acknowledge the extraordinary precision and exactness with which Dr. Hasse performed it. True it is that this precision was the result of a long experience, I being the fifty-first patient operated on, and he has since then several times repeated the operation. His only assistant

was an elderly gentleman of Nordhausen, not a medical man, but who had the advantage of having already frequently assisted Dr. Hasse—a necessity for carrying out the operation with precision.

“Hasse possesses the merit of having made the operation as simple as possible. Two glass *canulae* and a simple india-rubber pipe to form a flexible link between them are all that he requires. There is also no question of any troublesome warming of the tubes, they being simply filled with a cold solution of carbonate of soda. The details of the operation are doubtless well known to you.

“Punctually at 4 P.M. the blood began to flow from a well-developed he lamb, three weeks old, into the median basilic vein of the left forearm.” (Dr. Redtel omits to mention the fact that Hasse generally uses arterial blood, and generally opens the carotid artery.)

“At first the well-known and increasing sensation of warmth in the arm was perceptible; after 35 seconds there followed formication, and marked redness of the skin of the face; after 55 seconds dyspnea commenced, and constantly increased, followed by a sensation of fulness in the epigastrium; 95 seconds, cessation of the transfusion on account of extreme dyspnea.

“I remarked that Hasse always regulates the duration of operation as much by the subjective sensations of the patient as by the objective appearances.

“4.2 P.M.—Pains in the loins commenced, lasting, with fearful intensity, for eight minutes, so that I screamed with pain: they then slowly diminished, but returned to a less extent after the interval of some hours.

“4.25 P.M.—I was put to bed, the pains in the loins and sense of oppression of the chest increasing.

“4.35 P.M.—Shivering.

“4.40 P.M.—Chattering of teeth, which increased; general rigor, with heaving respirations; slight blueness of skin.

“5.0 P.M.—Rigor has ceased; face pallid; tendency to sleep frequently interrupted by cough. I would here mention a curious sensation, which may explain the otherwise unintelligible pains in the loins. I felt that the pains in the loins, now only slight, had assumed a pulsatile character, synchronous with each arterial beat, so that they alternately increased and decreased, and with each increase of the pain I experienced a sensation as if the blood streamed in with a rush from the femoral vein into the great veins of the abdomen. According to this I might be inclined to assign to the pain a merely mechanical character; perhaps pressure of the distended inferior vena cava and abdominal aorta on the sympathetic plexus in the region of the lumbar vertebra.

“5.20 P.M.—Trunk very hot; extremities very cold.

“5.30 P.M.—Hands warm; perspiration has commenced; pulse 140, full; respiration 32. Blueness of face disappeared. Profuse perspiration, lasting till 10.20 P.M.

“Passed about 150 cubic centimetres—*i.e.*, about $5\frac{1}{2}$ oz., of clear.

bright yellow urine, free from albumen and blood. During the night, for the first time for a very long period, I slept without morphia, but not soundly, on account of frequent interruptions by cough.

"Early on the 2nd of July my temperature was $36^{\circ}6$ C. (98° F.); pulse 92, tolerably full; respiration 24. Temperature at 8 P.M. $38^{\circ}3$ C. ($100^{\circ}9$ F.), this being my regular evening temperature before the transfusion. The only striking change in my condition after the operation was the cessation of all difficulty of swallowing; cough and expectoration remained the same: 180 centimetres, about $6\frac{1}{2}$ oz., of sputa daily.

"On July 2nd, in the afternoon, urine was passed, containing a minimum trace of albumen, but no blood; afterwards the urine was always normal.

"On July 7th an eruption of urticaria appeared over a great part of the body, preceded, on the 6th, by a feverish condition. The exanthema accompanied by rather high fever, which strangely did not subside on the appearance of the eruption, but rose continually for some days, and made me so ill I remained two days longer in bed. It was specially marked on the knee and foot joints, but the soles of the feet and the face were free. The itching was intolerable, and I passed very bad nights.

"On the afternoon of the 8th of July the exanthema disappeared, but left me very faint and weak.

"Improvement of the appetite, which is a general result of the operation, did not show itself in me until to-day.

"On the 13th we travelled home, and before my journey a minute examination of my chest was made, as had been done before the operation. This last examination gave a favourable result—viz., increased expansion of the left half of the chest, which was the seat of disease; a clearing-up of the left infra-spinous fossa, which had been dull before; 3rd, a clearing-up of the dulness in the left infra-clavicular fossa; 4th, a disappearance of the bronchial breathing in the left supra-spinous fossa. But after all, I must confess that my general health was not improved, in spite of this favourable diagnosis, and specially there was no diminution in the cough and the amount of sputa.

"The quantity of blood that streamed into me in the ninety-five seconds Hasse estimated at about 100 centimetres, about $3\frac{1}{2}$ oz., because after the cessation of the transfusion in ten seconds about 10 octometres flowed into a measured glass. But this supposition is, of course, incorrect, as the pressure in the veins of the human being is not taken into consideration, nor the decrease in the power of the lamb's heart as it loses blood.

"This last error is certainly a slight one, but the first is possibly very important. To determine the amount of pressure within the veins would be no easy matter for a physicist; besides which this pressure is naturally different during inspiration and expiration, and the number and duration of inspirations, and the duration of each,

should be taken into consideration. Practically the amount of blood transfused is of secondary importance, as the length of the operation will depend on the physicians' observations, subjective and objective, on the patient; about the indications of the operation very little is ascertained.

"Probably with this as with so many other sanatory methods, a too extensive application of it will have evil results, and thus frighten people. A first indication is anemia, and the operation is dangerous in proportion as there is less anemia. This may be indeed taken for granted *à priori*, and Hasse assures me that the fuller the pulse before operation the more serious were the appearances of reaction. Hereafter we must learn not to look on this operation as a last refuge, although even then there have been astonishingly good results. It is also indicated after losses of blood of all sorts, for any reason, and by the very simplicity of the operation it commends itself in future in times of war. In addition, I mention to you an occasion where it has not yet been employed, but where it would be an especial blessing—I mean the condition where there is grave hemoptysis, ushering in commencing phthisis—hemoptysis followed by extreme anemia, retching, and entire loss of appetite. Disease of the lung is hardly to be then detected, and could certainly be prevented, as after transfusion in all cases of anemia there is immediate improvement in the appetite and of the whole nutrition of the body. Hasse quite agreed with me, I, unfortunately, having personal experience of this form of disease. Hasse intends trying it at the first opportunity. As regards phthisis it appears that the best results are obtained in those cases where the lung disease was the result of degraded nutrition—*e.g.*, in phthysical women after frequent childbearing, where the greatest and most remarkable results were obtained. Less remarkable, and indeed even doubtful, has been the result in those patients where the disease of the lung was the primary lesion and general health was secondarily affected. This was my case. Yet Hasse assured me even here there have been good results, sometimes weeks or months after the operation. To transfuse a phthysical patient who has a full strong pulse appears to me not only purposeless but even dangerous. When others have seen unfortunate results from the operation, its want was probably either not indicated or it was not well performed. Hasse, in fifty-two cases, has had only one unfortunate result. Now the operation will be manifoldly tried, in all possible conditions of disease, and I am convinced there will be many failures if the amount of blood introduced be not regulated by the degree of anemia present. Therefore it would after all be important to be able to measure the quantity of injected blood.

"The complex nature of the symptoms is very remarkable—rigor, heat, sweat, all follow together in forty-six hours, showing a clear intermittent attack, and further observations will be most interesting as throwing light on the nature of infectious maladies. The eruption mostly occupied my mind. This generally appears from five to

fourteen days after the operation as a very distinct form of urticaria. To explain its origin, regular blood analyses would be above all necessary. Unfortunately I could not do this, but I consider probably that it is to be assigned to some decomposition arising from mixture with the lamb's blood setting free little bodies, which cause the exanthema. This would explain why the eruption appears so late, and its period of breaking forth has such wide limits.

"Examinations of the blood would without great difficulty show if this theory be well founded."

Dr. Redtel then describes his present symptoms—*i.e.*, on the 25th of July, 1874, which were those of advanced phthisis with laryngeal complications, that they are gradually becoming worse, and he is calmly awaiting death in the bosom of his family.

In concluding the reading of this translation, whilst expressing my entire disapproval of the employment of the operation in this case of phthisis, as one quite unfit for it, I cannot help feeling great pity for the fate of the talented author, whose zeal for new methods of treatment and whose powers of clinical observation would have assisted the cause of medicine greatly.

A short account of several other cases of phthisis transfused with lamb's blood by Hasse is given in the *London Medical Record*, December 31st, 1873, by Mr. Bellamy, when the symptoms seemed much the same as in the present instance, but rather more favourable, and were accompanied by increase of weight. It seems the dyspnea, amounting almost to asphyxia, was more marked after the lamb's blood was used than after human blood was.

This seems to be the only serious objection to the use of lamb's blood, as the smaller size of the corpuscles rather recommend it. The great objection to the operation in phthisis seems to me to lie in the fact of the very great and sudden stress thrown on the pulmonic circulation and the already blocked lungs by the introduction of more blood than their reduced number of vessels will accommodate, and the consequent increase of cough and dyspnea. Knowing the tendency to congestion of these organs in consumption, we can hardly counsel any fresh exciting cause.

Dr. Redtel's advocacy of transfusion of lamb's blood in time of war is a picture hardly likely to be realized. Dr. Aveling said that he thought one great objection to Dr. Hasse's instrument was that the quantity of blood transfused could not be measured by it. He also preferred human venous to lamb's arterial blood.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Meeting, October 27th, 1874.

Removal of a large Fibro-Myoma from the Fundus Uteri.

A paper was read by Mr. LAWSON TAIT, of Birmingham, in which he described a successful operation for the removal of a large fibro-myoma from the fundus uteri. The patient, whose age was

thirty-four, had suffered from a large abdominal tumour of rather rapid growth for five years. There was profuse menstruation, and frequent symptoms of pressure on the pelvic organs. The tumour was central, and reached two inches above the umbilicus; was completely solid, and moveable with the uterus. It was removed by an operation on January 16th, the steps of the operation being exactly the same as for ovariectomy. The tumour was found to spring from the whole of the fundus uteri, and the part of that organ above the internal os was removed with it. Recovery was rapid and uninterrupted, and the clamp came away on the eighth day. The tumour weighed eleven pounds, and was an ordinary fibro-myoma.

Mr. HOLMES inquired under what conditions such serious operations were advisable.

Mr. SPENCER WELLS made some valuable remarks on the operation, but promised to bring before the Society the statistics of all the cases in which he had operated for such tumours. He stated that he recollected only three cases in which the operation was successful, and in one of them cancer of the neck of the uterus occurred a year later. In one case he removed a tumour weighing 20 lbs., which was killing the patient by its presence, and the patient was now well. The mortality, however, Mr. Spencer Wells considers, must always be more serious after such operations than that of ovariectomy, and he made it a rule never to interfere unless the life of the patient was endangered by bleeding, or by pressure on the intestine or the uterus. We shall look with interest for the promised paper containing Mr. Spencer Wells's experience on the subject.

In reply to Mr. COOPER FORSTER, who inquired what treatment should be adopted in cases where severe hemorrhage occurred from the presence of fibroids in the wall of the uterus? Mr. SPENCER WELLS pointed out that the question of gastrotomy need never be entertained, as they might always be removed by dilatation of the os and enucleation, or other means.

Mr. HOLMES criticised the way in which the case was brought before the Society. The paper should at least have contained some more details as to the reasons for undertaking such a serious operation, beyond the statement that there were "symptoms of obstruction," and that the patient desired it. He suggested moreover that the danger of the operation was increased by the solid nature of the tumours, which would tend to the formation of adhesions, and the pedicle would also, in all probability, be thicker and more vascular than in ovarian tumour.

Mr. VICTOR DE MÉRIC also blamed the author for not at least stating some of the experience of previous operations, and describing in more detail the mode of operating in such cases. He referred to Dr. Marion Sims's work on intra-uterine fibroids, in which allusion is made to the great success recently obtained by Péan in operations on extra-uterine tumours, and removal of the whole uterus.

(*Mr. Lawson Tait's Reply, sent to the Lancet.*)

Mr. Holmes seems to have made what is to me quite a gynecological discovery when he stated that the solid nature of such tumours tends to the formation of adhesions, and therefore increases the risks of the operation—that is, I presume, increases the risks on that account over those of ovariectomy. I am not aware of any published results of Mr. Holmes's practice in the removal of abdominal tumours, and therefore I do not know on what he bases his statement. But my own experience is exactly the reverse; for out of a considerable number of cases where I have seen the abdomen opened, before and after death, in the presence of a large uterine tumour, I have never yet seen an adhesion, whilst in the case of ovarian tumours their complete absence has been almost exceptional.

My patient was of very small size, and only thirty-four years of age—that is, she had about fourteen years or more to live before she would reach her climacteric period, at which such a tumour might cease to grow. The tumour had been rapidly increasing in size, and at the time of operation it weighed eleven pounds; and Mr. Spencer Wells stated in the discussion that he had been obliged to remove one only nine pounds heavier in order to save his patient's life. The late removal of a solid twenty-pound tumour must be a far more formidable operation than the earlier removal of one of eleven pounds weight. These facts, even without the additional reason that the patient's life was constantly in jeopardy by attacks of intestinal obstruction, and by the increasing discomfort, pain, and exhaustion, would have been sufficient to determine me to advise the removal of the tumour; and the complete relief of all the symptoms by the operation has justified the proceeding, at least in my opinion and in the patient's.

On the other hand, might I ask Mr. Holmes if it has been his practice in all his operations for the removal of tumours to wait till the growth has nearly destroyed his patient before he attempts a cure? In the case of a tumour in the neck, would he advise waiting till the growth had occupied all the available space, and displaced or involved all the important structures in its neighbourhood? If he has done this, then his practice has been very bad; and if he has not then he has but scant reason for blaming me for removing a tumour which I had diagnosed to be removable, and which I removed at a time when a cure was possible, instead of waiting till the successful result of an operation was hopeless. I have had occasion to remove an ovarian tumour, successfully, not more than six ounces in weight, because it seemed to be interfering with the patient's life, and I know of other cases like it. But ovariectomy is now an established operation; whilst the successful removal of uterine fibroids still remains to be worked out, and the way shall not be stopped by mere alarmists.

In answer to Mr. de Méric, I may say that my paper was a specific

case, and not on previous operations devised by others. These will be considered in another paper which I have in progress, and which I hope to be able soon to submit to the Medico-Chirurgical Society. In it the operations of my friends M. Péan and Dr. Marion Sims will be discussed to the best of my endeavour. The case now submitted is only one of a series, all to be published; but it is the only one I have had of its kind—that is, the only one removed by abdominal section.

Case of a Foreign Body Impacted in the Female Pelvis for Twenty Months—Recovery after its Removal.

Mr. RICHARD BARWELL read notes of the above case. The lady, the subject of this paper, having great dread of identification, it becomes necessary to conceal under a pseudonym the medical man who called Mr. Barwell to the case. In May, 1874, Dr. Blank called Mr. Barwell to a lady, aged twenty-four, with abscess about the hip, and gave the following history:—Miss X. had consulted Dr. Blank for supposed sciatica in February, 1873, but he gave the opinion that she was not suffering from mere sciatica, but from some local irritation. Under the treatment prescribed she got better, and he lost sight of her for a year. She then called on him again, with abscess, and he extracted the confession that some time before the first interview she had been seduced, and by the intervention of a female friend had procured the services of an abortionist. This man had passed in at the vulva what by description was judged to be a gum-elastic catheter; it was left *in situ*. The man returned next day, but nothing save the ivory button was left for removal. Mr. Barwell found a large abscess over the hip, and a sinus in front of the anus, which did not communicate with the abscess. He was obliged to content himself with letting out the pus, which was highly feculent. A week after he examined the patient—per vaginam: leucorrhea, a pendant cervix, and a patulous os uteri; on passing the finger around the cervix, Mr. Barwell felt in posterior *cul-de-sac* a transverse line of induration, but no opening anywhere in the vagina. Per rectum, by searching very high, and with a good deal of pressure over the pubes, a like line was detected in front of the rectum. Search was made for an opening, and after a time, still higher in the bowel, a small one was discovered; this was dilated, the finger introduced, and a foreign body found. A narrow pair of long forceps was passed in, the body seized, and a loop of it drawn through the opening into the rectum, and within better reach of the finger which was hooked into it. Thus was drawn into the rectum, and out at the anus, a gum-elastic catheter which had lain between uterus and bowel for twenty months. The patient has not had a bad symptom since the operation, but was perfectly well six weeks after, and has remained well up to the present time. The author reads the history thus:—It is probable that the abortionist used the catheter with the stylet, that he

passed it into the os uteri, and thrust it through the posterior wall, but only to a certain extent, and withdrew the stylet; that subsequent defecation, and the expulsive movements of the uterus, forced or drew the remainder of the instrument through the wound. That it lay curved (in form like the brim of the pelvis) between uterus and rectum; set up the irritation attributed to sciatica, and afterwards the suppuration terminating by opening outwards and into the rectum.

OBSTETRICAL SOCIETY OF EDINBURGH.

Meeting, July 8th, 1874.

Observations upon the Nature and Treatment of Difficult Occipito-posterior Positions of the Head, founded upon an Analysis of Twenty-six Operative Cases.

By ANGUS MACDONALD, M.D., F.R.C.P.E., F.R.S.E.

It has long been known among accoucheurs that when the head arrives near the base of the pelvis, with its long diameter so disposed that the occipital fontanelle is directed towards either sacro-iliac synchondrosis, the normal mechanism of delivery is liable to be tedious, and even to be frequently interrupted and deranged.

Associated with these interruptions and derangements, one particular mode of delivery is apt to arise, which the older accoucheurs were wont to term "face to the pubes." This, we know now, is no particular form of presentation, however, but simply an arrested occipito-posterior position; but it no doubt proves itself a difficult method of termination in those cases. That nevertheless the termination of labour, even in the normal manner with rotation of the occiput forwards, under the aid of forceps, is not unattended with difficulty, and requires special care and management to prevent injuries to the lower part of the vagina in *primiparæ* at least, has been long impressed upon my mind. It was this fact, combined with the conviction that there exists among the ordinary authorities on the subject a somewhat unsettled opinion respecting the treatment of difficult occipito-posterior cases, that has induced me to draw the attention of the Society to this subject for a short period of time.

Believing as I do, with many Continental authorities, that the head usually enters the brim with its long diameter either exactly or approximately in the large transverse axis of the inlet of the pelvis, I am bound to hold that cases of occipito-posterior presentation do not become such till the head has advanced some little way into the pelvis, and indeed do not present under ordinary circumstances any special difficulty till the head meets the resistance of the floor of the pelvis.

In support of the statement now made, relative to the non-existence

of an initial Solayres obliquity, we have to state that, in a considerable number of cases carefully examined during the early stage of labour, we have satisfied ourselves that the head passes approximately transversely at that time across the inlet.

But furthermore, the supporters of the initial Solayres obliquity have yet to prove under what force, or for what purpose, the long diameter of the fetal head should seek to squeeze itself into the oblique of the brim, when it has the choice of accommodating itself in the transverse diameter, which is at least by half an inch the larger.

The common argument that the transverse is shortened by the encroachments of soft parts upon its extremities, has always appeared to me both weak and irrelevant. For any one who carefully examines a female pelvis, with the soft parts lining it, will, I think, feel disposed to confess, were he not previously thirled to the support of that obliquity theory, that the soft parts encroach most upon the posterior ends of the two oblique diameters.

Still the gradual approximation of the sides of the pelvis, at the extremities of the transverse diameters, as the head descends, makes it assume, long before the floor of the pelvis is reached, a position such that its antero-posterior axis coincides more or less accurately with one or other of the two oblique diameters of the pelvis, so that in difficult cases of obstructed labour, with the occiput backwards, it is seldom that the ordinary short forceps has strength and length, enough to grasp the head; consequently we require, as a rule, to employ the longer curved instrument—a necessity which is, as I shall have to point out by-and-by, not unattended with considerable risk to the soft parts, provided the rotation movement of the head takes place while we are engaged in the traction efforts.

The great bulk of the cases presenting the occiput backwards terminate quite naturally without any assistance whatever. Indeed, they may be found to terminate with more than the usual celerity at the latter part of the second stage. This, however, is commonly preceded by a period of distinct retardation. I have again and again seen such a case, in which the head had been arrested in its advancement near the outlet for half an hour, an hour, or even an hour and a half, while the pains were moderately strong, terminated by a single pain the moment the head effected its normal long rotation. It is barely a month ago since I purposely allowed an occiput to the right, which assumed to some extent also the nature of an intermediate or brow presentation, to be delayed for an hour under pretty powerful pains, which were distinctly causing the parietal and frontal ridges on the left side of the head to bend; but whenever I pulled downwards and forwards the occiput, and pushed upwards the brow, two pains of no great severity—1st, terminated the rotation forwards of the occiput, and, 2nd, the expulsion of the head. This case, as I maintain all cases capable of easy rectification to be, was a small head, and the pelvis was of fair size. No doubt a large proportion of those

labours known as "precipitate labours," if carefully classified, would be found to be cases of sudden termination of occipito-posterior positions of the head.

Between positions of the head, with the occiput towards the left and backwards, and those of the occiput towards the right and backwards, I do not think there is such a disparity as Naegele's observations would lead us to suppose. I am sorry I have not kept an accurate record of the cases I have had presenting this peculiarity; but my conviction, from the frequency I recollect of meeting it, is that it is not at all unusual. One point in respect to those cases of this position which, in my experience, have turned out difficult, is this, that they very much more frequently than the corresponding position to the right terminate as "face to the pubes."

This leads me to say that though, as noted above, the great majority of occipito-posterior positions of the head occur in labours which terminate naturally, yet the long rotation is so apt to fail, that a considerable proportion need to be aided by instrumental or other means.

These cases further divide themselves, in regard to their terminations, into—

1. Cases which terminate by the original occipito-posterior position becoming exaggerated, the forehead and brow of the child being squeezed against the body and descending ramus of one or other of the pubic bones, and the vertex and occiput ultimately sweeping the perineum, *i.e.*, as "face to the pubes" of the older authors. This, however, is, according to my experience, the result only in about 25 per cent. of those difficult or operative cases; or—

2. The rotation takes place while the operator is exerting traction efforts, and that purely as a result of the mechanical conditions, at the outlet of the pelvis, depending little, *if in any degree*, upon any voluntary rotatory efforts on the part of the operator.

But if the soft parts of the mother are tight and non-elastic, this rotation is exceedingly apt to lacerate them at the outlet, as it throws the forceps into an oblique position, against the injurious consequence of which the operator has to guard.

So far as my experience goes, it seems to point to the conclusion that whether an obstructed case of this kind terminates as "face to pubes," or by rotation of the occiput forwards, if the case is finished instrumentally, depends more than anything else upon the period at which the instruments are applied. If they are applied comparatively early in the case, we have rotation at the outlet; if at a comparatively late period of the labour, we have the case terminating without rotation.

Let me now briefly analyse the records of twenty-six cases of difficult occipito-posterior cases, which I have within the last two or three years delivered by forceps, either in my private practice, my dispensary practice, or otherwise.

Of these twenty-six cases, six terminated as "face to the pubes," whilst twenty underwent the normal forward rotation of the occiput, and ended in the ordinary way by extension of the head below the symphysis pubis under the influence of traction only. I say emphatically *under the influence of traction only*; for I never exerted the slightest force in the direction of favouring the rotation movement, and indeed have often wished that it could have been delayed until I was able to have removed the forceps.

Of these twenty-six cases, eight, or nearly one-third, presented with the occiput towards the left sacro-iliac synchondrosis; and of these eight, four, or 50 per cent., terminated as "face to the pubes."

Of the eighteen cases which presented the occiput towards the right sacro-iliac synchondrosis, only two terminated as "face to the pubes."

Of the twenty-six cases, twelve, or 46 per cent., occurred in *primiparæ*, so that in them we had to contend with defective rotation in connexion with soft parts in a state of considerable rigidity.

Of those which terminated as "face to the pubes," four of the mothers were *primiparæ*, and two *multiparæ*. In those six cases which ended as "face to the pubes," in one case only, and that, too, a multipara, did there occur anything other than the most trifling laceration of the sort parts.

In this case the laceration, which was not at all severe, affected the back wall of the vagina without involving the perineal tissues, and happened at a part where the forceps could not reach. It very soon healed up, however, and never gave the least inconvenience.

I have been most disappointed with the results in the cases wherein rotation took place. I do not mean to say that the results have been at all bad; for of these twenty-six cases, only one terminated otherwise than most favourably for the mothers; and in the fatal case, the result, I am satisfied, was not referable to the forceps operation. That the members of this Society may also satisfy themselves on this head, I will record the case at length in the course of this paper. As it is a typical case of the difficulty I complain of, they will also thereby be able better to understand the grounds of my opinion as to the trouble which one meets in the management of such cases.

I am now inclined to believe that lacerations of the lower third of the vagina in instrumental deliveries are far more common than one would expect, if he formed his opinion solely by the little reference made to them in the ordinary British text-books. But it is necessary here to notice, that by lacerations of the vagina, I do not mean those of the fourchette or perineum, which are allowed on all hands to take place in greater or less degree in almost every first case. On the contrary, I understand interruptions to the continuity of the

vaginal mucous membrane in other parts of its circumference than in the mesial line posteriorly.

At one period of my obstetrical practice, I seldom or never found any lacerations, incisions, or abrasions of the vaginal mucous membrane after operating. But now, after having my attention more strongly than pleasantly drawn to this subject by one or two of those troublesome cases, and also from finding statements corroborative of my observations in several German authors, more particularly in Schroeder, I must confess that I seldom meet with a moderately severe instrumental case in a primipara without being able to detect some little button-hole, abrasion, or even more serious injury of an incisive nature, in the vagina.

I cannot charge myself with operating with any less care, but am conscious that the very reverse is the case; and I trust also that increased experience and advancing knowledge are not diminishing my skill in the use of forceps; only, after every forceps operation of any severity, I am now in the habit of subjecting the vagina to a careful tactile scrutiny, which I did not do formerly. On this principle I explain the difference between my present and former experience.

Luckily, however, such abrasions or button-holes seldom lead to any really injurious results. Having due regard, however, to the facility with which parturient women become the victims of all sorts of septic influences, one would like to avoid those solutions of continuity as far as possible.

But now, to take up the consideration and special treatment of those two terminations separately. I hope the Society will pardon me if, for perspicuity's sake, I briefly run over the chief points in the mechanism of a case which terminates as "face to the pubes."

Let us suppose the head in the left oblique diameter, and at or near the floor of the pelvis.

The occiput, instead of advancing downwards and forwards from the region of the left sacro-iliac synchondrosis, so as to get forwards from left to right successively into the transverse, then into the right oblique, and ultimately under the left descending ramus of the pubes, while the forehead should glide from right to left backwards over the right side of the pelvis until it ultimately reaches the hollow of the sacrum, keeps still backwards, and indeed, to a small extent, rotates in quite an opposite direction, becoming thereby nearly, but never completely, in the middle line of the sacrum. The forehead, on the other hand, rotates slightly forwards from right to left, leaving the region of the right foramen ovale, and becoming compressed against the body of the right pubic bone, and also against the upper part of its descending ramus. By this mechanism, or rather failure of mechanism, the child's head is made to engage at the outlet with its large fronto-occipital diameter in the small oblique diameter of the outlet of the pelvis, instead of presenting its

lesser suboccipito-bregmatic, which is the diameter engaging at the outlet in ordinary vertex cases, when the head undergoes the normal extension, with rotation of the occiput forwards. It follows that thereby it must meet with greatly increased resistance, and so it does. The great resistance thus presented to the advance of the head in this position is such as to implant a special type to a child's head thus born.

It is accordingly found that if the labour is prolonged while the head is situated as I have already stated, it becomes remarkably shortened in the fronto-occipital direction, and elevated in the bregmatic region, giving the child's head, if examined immediately after labour, a very curious and rather odd appearance. Indeed, so great is the tension to which the fetal head is exposed under such circumstances, that occasionally, as I have myself seen, a large cephalhematoma is formed in the region of the anterior fontanelle.

If we now examined such a case for the first time, we should find that the anterior fontanelle was easily reached, and immediately behind the symphysis pubis only a little more of it would be to the right than to the left of the mesial line, while the sagittal suture would run nearly antero-posteriorly, but inclining slightly to the left towards its posterior extremity, while the posterior fontanelle could be reached with very great difficulty.

If now the pains are very strong and the head not too large, the forehead remains fixed against the right pubic body and the right descending ramus of the pubis, whilst the occiput is gradually pushed down over the lower part of the sacrum, coccyx, and perineum. In the course of this advance of the occiput, it follows that, notwithstanding the relief gained by the shortening of the occipito-frontal diameter under the influence of the pains, the great bulk of the child's head must so act as to excessively distend the perineum, inasmuch as the forehead is incapable of advancing upwards and forwards, as the occiput does when it escapes from under the symphysis, and thus eases the tension of the forehead as it sweeps over the perineum in ordinary vertex cases. If, however, the occiput is gradually advanced under the pressure of pains of moderate severity, and the perineum is not found to tear, first the mass of the vertex, and then the occiput, get over the anterior edge of the perineum; after which the forehead and face of the child, which hitherto had been tightly implanted behind the pubic bones, get loosened, and are enabled to slip downwards and forwards. The birth of the head is in this way completed by a motion of extension. The movement called restitution is, in this case, such as to make the face of the child look towards the right thigh of the mother, and to bring the right shoulder forwards under the symphysis pubis, whilst the left is made to sweep the perineum. The accomplishment of this mechanism unaided presupposes a small head and a roomy pelvis, conditions under which, though I have seen it, it has occurred in my experience only rarely. Under such circum-

stances, of course, no real difficulty does or can arise, and the duty of the accoucheur is clearly to keep from all interference.

I am led by what I have observed of such cases to believe that we seldom meet with this kind of mechanism, or rather failure of mechanism, in roomy, well-formed pelves, with normally-sized heads; as under such conditions occipito-posterior cases complete the normal rotation of the head forwards, and the cases are finished without interference, and "face to the pubes" seldom or never requires to be encountered. They occur almost invariably, so far as my experience goes, in cases where the head in relation to the pelvis is disproportionately large, or where there is reason to believe that the pelvis is defective in the conjugate, or too large in the transverse diameter; so that with rare exceptions, I have found it absolutely necessary to employ forceps before the head could be got to emerge from the oblique diameter at the floor of the bony pelvis.

For these reasons also, I have seldom seen it either practicable or advisable to use instruments with the intention either of bringing down the occiput or of favouring its rotation forwards; for it has in my hands proved either clearly impossible to effect this rectification, or, as the original conditions determining that error in mechanism were still operative, they have proved the maintenance of the rectification, even when it had been effected, impossible.

When so speaking, however, I mean to restrict myself to really difficult cases. I do not wish to assert that displacements of various kinds may not occur of such a nature as to retard labour when the head is very small or the pelvis very large, and which may at the same time be readily rectified. The case of half-brow, already recorded, is an example of the kind I mean, and the following abstract of a case is of a somewhat similar nature:—

Mrs. R. (II *a.*) fell in labour at full term on Monday, 8th December, 1873, the first symptom being rupture of the membranes at 6 P.M. This was followed by very slight pains for three hours, and then they increased in strength and in frequency. She was seen and examined at 10.30 P.M.; cervix found nearly dilated, and quite soft and dilatable. The head presented, but was observed to be very small and obliquely situated. The occiput was turned to the left side of the mother's pelvis, running so that the smaller fontanelle was somewhat posterior to the larger as well as on a higher level. But the child's head was strongly flexed towards the right shoulder, so that the left parietal bone presented, the right being immediately behind the symphysis pubis, and the sagittal suture passing close behind and below the pubic arch—the greater fontanelle being behind the upper third of the right descending pubic ramus. Only a small portion of the upper edge of the right parietal bone could thus be felt; though the left side of the head was pushed well down, so as to occupy the hollow of the sacrum, and present at the outlet. In this position, the head remained for nearly an hour

without making any perceptible progress. I then introduced the two forefingers of the right hand, so as to seize the occiput, and pulling it downwards and backwards, and then forwards, in the interval between two pains I succeeded in almost completely undoing the right lateral obliquity, getting the right parietal to descend and the occiput forwards towards the symphysis pubis. I then held it there till a pain came on, and fixed the head on the perineum. Other two pains completed the expulsion of the head. The child was small, imperfectly nourished, and stillborn.

What I maintain is, that in such cases the rectification is so easy that they are not worth being called difficult cases. A few extra pains would almost invariably set them right without interference.

One of my chief reasons for bringing this subject under the notice of the Society is, that I feel very strongly convinced that Professor Leishman, in his work, which I have no hesitation in saying is by far the first text-book of Midwifery in the English language, recommends, more freely than I am inclined to believe is either proper or safe, methods of treatment, which have for their object rectification of the position of the head in difficult occipito-posterior cases by means of levers, forceps, &c. I am persuaded that in almost all cases in which the conditions are such as to determine a forward position of the forehead, attempts at rectification of the position will prove abortive. Holding these views, I cannot but regard with considerable dread the dissemination among students of the idea that levers and other instrumental means may be freely used to bring downwards and forwards the occiput.

One, however, feels little inclined to discuss questions involved in such difficulty as the rotation movement of the fetal head, were it not for the injurious practical evils which too free interference with the mechanism is calculated to bring upon the unfortunates in whom these irregularities of presentation occur. While I have never met with what might be called a really difficult case of occipito-posterior position, in which there seemed to me the slightest chance of rectification by means either of hand or lever,—and at one time of my practice I was wont to endeavour to rectify with the hand,—on the other hand, I have failed to discover any injurious results from the application of forceps, even in cases which terminated as “face to the pubes,” either in my own practice or in that of others which I have seen. Moreover, I do not think there is here so much risk to the perineum as some writers would have us to believe. No doubt the perineum is much distended. But almost all risk in such a case from rupture may, I think, be avoided by judicious management. When such a case turns up in my practice, I never leave the head to be completely delivered with the forceps on; but, after pulling it down with instruments so far as to allow me to get command of the occiput by the finger in the rectum, I then take off the blade and allow the pains, which have usually by this time become weak, to expel the head. But if the contractions are too weak, or if the

perineum seems in specially great danger, I endeavour to get the head over the perineum in the absence of all uterine contraction, according to Von Ritgen's manipulation.

The forceps have always in my experience been capable of effecting delivery, and only in one instance did there result a vaginal tear worthy of the name, and even this was of the mucous membrane in the back wall, not involving either rectum or perineum. It quickly, as I have said already, healed. Very severe cases of this presentation lead, no doubt, occasionally to the necessity for craniotomy. But luckily I have as yet not met with one which could not be overcome by the use of the forceps.

Now, as to the reason why those occipito-posterior cases are so frequently defective in regard to their rotation. This is a question really very difficult to answer.

Of course the great distance over which the occiput must glide forwards and the forehead backwards, is of itself sufficient to account for some proportion of the failures; the uterine action proving unequal to complete the task, even though the occiput gets well down. But the occiput not getting well down at first, as Dr. Uvedale West has pointed out, may also be to blame for some of the defective cases.

But, then, even in cases of "face to the pubes," the occiput gets ultimately so well down as to be the leading point in the completion of the labour when the mechanism fails, and yet it does not come forward.

I do not believe, with Leishman, that in those cases of rotation forwards of the occiput in posterior cases it is necessary, or is the fact, that the occiput requires to get down so far as to be placed within the antero-posterior line of the pelvis which passes horizontally through the apex of the ischial spine of the side towards which the occiput is directed. I am satisfied that many, if not all, of those cases which rotate, do so while the occipital protuberance is distinctly above the level of the corresponding spine of the ischium, and indeed that the occipital end of the cranial lever passes over the spine in its motion forwards. Of this I have again and again convinced myself by careful and prolonged observation while the mechanism of rotation forwards was taking place.

I consider that we are too much inclined to regard the fetal head as an unyielding mass in dealing with the initial steps of this movement, and that more of the initial tendency of the head to move forwards is owing to its elastic nature and its capacity for getting moulded under the influence of the pains. The force, then, of the pains transmitted along the spinal column is expended most upon the occipital extremity of the plastic mass formed by the child's head; and as only in one direction, viz., forwards, can this mass make way, as it is surrounded by unyielding hard structures both posteriorly and laterally, it begins to bulge in the unresisted anterior direction, and thus a tendency is established which no doubt has the effect, in

favourable circumstances, to a certain amount, of making the forehead rise somewhat, so as to leave more room for the parts under greatest tension to occupy. It is also to be remembered that the projection formed by the posterior parietal protuberance, in cases of occipito-posterior presentation, acts at a much greater advantage in exerting a tendency for the hind head to glide forwards than it can effect in cases in which the occiput is towards a foramen ovale. At any rate, I have watched for hours occipito-posterior cases before they rotated, and have observed that the moulding process invariably preceded the marked, and often instantaneous, rotation of the head forwards.

I am inclined to believe that, though relative narrowing of the transverse diameter of the pelvis is no doubt a chief cause of those difficult occipito-posterior positions, general large size of the head is a most important factor; and that in consequence of this large size of the head the forehead gets so wedged into the pelvis anteriorly that its tendency to slacken and rotate backwards does not come into play. So soon as it fairly refuses to move backwards as it ought to do, the self-same plastic condition of the child's head, acting through the bregma, which is now the part exposed to least resistance, wedges it more and more into the unsupported space, and thus very quickly renders rotation of the forehead backwards, and consequently also rotation of the occiput forwards, impossible; so that the same plastic condition of the head which affords the best explanation of the causation of the proper rotation forwards, likewise explains best the failure of that rotation when the head is large.

That, however, pelvic specialty of conformation has much to do with these irregular positions, the frequency with which they recur in the same woman very pointedly attests.

In one of my patients, I find her labours, which have been three, to be made up of two occiput-posterior and one face case; all were, however, comparatively easy. In another, there occurred three occipito-posterior and a brow. In a third patient, who had been confined four times, the presentations have run three occipito-posterior and a face.

I might, indeed, multiply such examples from my notes of cases, but those recorded are sufficient to prove that occipito-posterior positions are apt to repeat themselves in the same individual.

A few words now in closing, respecting the treatment of those difficult occipito-posterior cases, in which, from original uterine inertia, from exhaustion of the uterus from severity of pains, or from other causes, the forceps were needed to effect delivery; but in which, when the head had arrived at the outlet of the bony pelvis, the occiput rotated forwards.

Such cases are not to be confounded with cases of obstructed labour, in which the head is seized by forceps high up in the pelvis before it left the transverse diameter. They were all carefully diagnosed as cases of occiput to either sacro-iliac synchondrosis

before instruments were applied. It does not, however, matter much, although any of them had been cases of original transverse position of the head ; because even then the same difficulty from the rotation of the occiput forwards at the outlet, when in the grasp of the curved forceps, would be experienced ; only in that case to a less degree, inasmuch as the angular divergence between the conjugate and either end of the transverse diameter is less than the angular distance between the anterior extremity of the conjugate and the posterior extremity of either of the oblique diameters, measured along the brim of the pelvis. In these cases we usually experience difficulty before the head is well down towards the floor of the pelvis ; and I believe, not so much on account of the position, as on account of the general large size of the head, combined with the arrest of proper pains in a uterus that has been worn out in a difficult first stage. I repeat, the obstruction can rarely be completely explained by the position ; because before this obstruction, due to defective rotation, can come into play, the vertex must have descended to the level of the lower edge of the body of the third piece of the sacrum, which I am satisfied it had not done in all my cases. Still, the backward direction of the posterior fontanelle has, no doubt, something to do in rendering these cases more troublesome than they would otherwise have proved. In two or three of those cases the heads were so large that the concavity of Simpson's long forceps was found incapable of embracing the whole of the head, and the instrument was found to enclose only a portion of it. From this there results a very marked tendency in the instrument to slip, which, in the first case of the kind I saw, very much puzzled me.

In all of those twenty cases, rotation took place wholly or partially at the outlet of the bony pelvis, and purely as a result of traction efforts. In no case did I find the slightest inconvenience when dealing with *multiparæ*, nor could I detect in these the least trace of injury to the soft parts. On the other hand, in operating on *primiparæ*, I have been frequently galled to find abrasions and other interruptions of continuity in the vaginal mucous membrane at its lower part. These vexed me much, and led, on more than one occasion, to unnecessarily severe self-recrimination. The main cause of these abrasions, which at times amount to lacerations, and which, although they may be greatly diminished by care, and especially by operating slowly, are very difficult to avoid occasionally, is the rotation movement of the head at the outlet when in the grasp of the forceps, the soft parts at the same time being very tight. The result is this :—

Suppose we have to deal with a case in which the occiput originally presented to the left and posteriorly ; when the head is engaged in the outlet of the bony pelvis, it will be found to rotate under the influence of traction efforts alone ; and as it does so, it throws the blades of the forceps, which were originally applied solely with reference to the pelvic cavity, and in such a manner that the line

joining the central point of each fenestra would pass nearly transversely across the pelvis, into an oblique position. The left blade is now pushed upwards with considerable force towards the upper extremity and left side of the external genital fissure, whilst the right blade is turned downwards and made to project its sharp free border against the perineum.

Suppose now the pains are severe, or the traction efforts continued, we are very apt to have the vagina injured in both the situations referred to—viz., in the region of the left labium minus anteriorly on the left side, and posteriorly on the right, more or less to the right of the central line of the perineum.

Besides these risks it is exceedingly important to notice that the blade, which is in relation to the occipital extremity of the fetal head, is usually found to have been applied so as to receive the occipital tuberosity between the limbs of its fenestra. This part projects considerably between the limbs of the fenestra, and it requires some care to free the occiput from between the limbs before the blade of the forceps can be removed. If now, in our anxiety to avoid rupture from the awkwardly oblique position into which the blades have got, we attempt to withdraw the left blade too rashly, we are very apt to aggravate very much, if not occasion, the very tear on the left side, which we desire to prevent.

Such being the case, it has become my practice to remove the blades of the forceps so soon as the head is all but cleared of the bony pelvis, and preventing recession of the head by the assistance of passive pressure upon the forehead by the forefinger of the right hand in the anus, aided by gentle pressure on the abdomen by means of the left hand, to wait till the pains are able to complete the delivery, if that is at all possible,—guardedly aiding the effect of such pains by Von Ritgen's manipulation. The head, which as yet has only partially rotated as a general rule, now gradually and slowly completes the rotation so as to bring the sagittal suture nearly to coincide with the antero-posterior mesial plane of the body, and at the same time the soft parts are slowly and safely dilated; but if the resistance of the perineum is too great, or the uterine action completely in abeyance, the practitioner is obliged to reintroduce the forceps, and thereby effect delivery.

I have often thought that if one had always at hand a pair of straight forceps on these occasions, it would be advantageous to remove the curved blades when the head had been pulled well down into the outlet of the bony pelvis, and then, fixing it there by regulated pressure upon the abdomen, to apply straight instruments, and complete the delivery by their means. I have never been fortunate enough to have both sets of instruments with me at a case of this kind; but on the first opportunity that occurs to me, within easy reach of a short pair, I mean to try the effect. The short forceps could of course be allowed to rotate in any direction at will, without the slightest fear of bad results.

These cases, to my mind, form a considerable objection to the general rule—which, on the whole, is a good one—that one should accustom himself to the use of the long curved instruments only.

Another remark and I have done, and it is this, that I do not think that one is ever at liberty to undertake the instrumental charge of such a case without the aid of a skilled assistant to take charge of the chloroform at least. I have on more than one occasion experienced considerable discomfort and anxiety from having no other assistance than that afforded by a flurried and half-educated nurse.

As an example of some of the difficulties I mean, I give *in extenso*, as I formerly promised, the only fatal case I have met in this connexion, so that gentlemen may see by example what kind of cases I have been speaking of.

Mrs. M. M'G., aged twenty-three, (I *a*), confined on 21st of November, 1873. Patient took ill on 17th of November, but did not send for her medical attendant—a student attached to the New Town Dispensary—till the evening of the 19th. He remained with her during the night, and as she complained much of pain, he gave her first 30 gr. of chloral hydrate, and subsequently 23 minims of laudanum. On the morning of the 20th, on examination by my then assistant, Dr. J. B. Smith, the head was stated to be well down into the pelvis, and the cervix dilated to about the size of a crown-piece, but rigid, apparently owing to too frequent examinations (30 to 50 times) during the previous night. Pulse 78; pain and suffering not great. There had, however, been some vomiting. The membranes were stated to have been ruptured two hours previously. In the evening the cervix slightly more dilated, but grasping the presenting head very tightly, and a caput succedaneum forming. Pains weak and irregular, pulse good, and patient in better condition than in the morning. Breathing, however, rather quick, and evidence of extensive consolidation of the right lung at the apex. During this night the patient continued much in the same condition, getting from her attendant another dose of chloral, which procured her a little refreshing sleep. At 10.30 A.M. on 21st, I saw her for the first time. State then was, pulse regular, good strength, about 80, tongue clean, temperature normal, patient vomiting almost everything she took, uterus hard, and also tender to the touch. The bladder was largely distended, and there was a complete absence of pains. On examination per vaginam, head found well down, but cervix only about one-half dilated. A large caput succedaneum. Occiput to the left and posteriorly. A notch, about one-half inch in depth, in the left side of the cervix. Child's heart heard over the right lower aspect of the uterus; regular, but somewhat feeble.

The bladder was emptied, and the patient left till one P.M., in the hope that the pains might recur. At this hour, there being no recurrence of the pains, the long forceps were introduced; but on their introduction it was observed that the cervix was peculiarly lacerable

and fragile, giving way like wash-leather under the pressure of the finger. With considerable difficulty, the head, which was a remarkably large one, was brought through the outlet of the bony pelvis, undergoing at the same time the long rotation of the occiput from behind forwards and to the right, whereby the forceps were thrown into an oblique position, giving rise to partial laceration on the left side of the vagina and abrasion of the right. The left blade had become fixed over the occipital tuberosity, and the right over the forehead. Fearing further tear, the forceps were removed, in expectation that the contractions would now complete delivery. But notwithstanding every legitimate effort to induce uterine action, the inertia remained profound. The forceps had to be reapplied, and delivery completed artificially, which was effected about 2.30 P.M. The uterus contracted fairly after expulsion of the placenta, and there was no post-partum hemorrhage. The child, which was a male, was dead.

In the evening the patient was feverish, and felt much exhausted, the tongue coated and dry, pulse 120, respirations 50 per minute. No unusual tenderness over the abdomen. She had two Dover's pills, of five grains each, but during the night slept little, and next morning was still more exhausted. Pulse still 120, but exceedingly weak,—in fact almost imperceptible. Respiration 50; abdomen tympanitic, and great tenderness on pressure over the uterus. Patient ordered beef-tea and stimulants every half hour, a pill containing 2 grains of calomel and $\frac{1}{2}$ grain of opium every five hours, and hot fomentations, with turpentine stupes over the abdomen. At 1 P.M., she was much the same, but her nurse had been so very remiss as to give her brandy only once. At 6 P.M., pulse stronger, but otherwise she continued the same; at 10 P.M., she was evidently sinking; and at 11 P.M. on 22nd, she died.

A post-mortem examination was refused.

As already stated, I do not think the operation is chargeable with the fatal issue in this case. The painful termination of the case was no doubt due to acute metritis supervening upon a specially tedious labour, occurring in a patient enfeebled by the coexistence of pulmonary phthisis. Ever after I first saw the patient, I was concerned lest we should have a cervical tear passing up into the lower portion of the body of the uterus. This opinion was grounded on the fragile condition in which the cervix was found. But I had no reason subsequently to the operation to believe that such a rupture had taken place.

It is deeply to be regretted that the *nimia diligentia chirurgiæ* on the part of the student in attendance, should have been so perversely directed. It is only a poor apology that the errors were committed under the influence of the best of motives. I think it had been better had both chloral and opium been withheld; and certainly the frequent examinations during the first stage were alike injurious and unwarrantable.

The nature of the injuries inflicted by the forceps upon the lacerable

and irritable, but resistant soft parts, is typical of the class of cases I have just been discussing.

A question might also be raised here, which is, to my mind, one of the most important and difficult in practical midwifery, and it is this : When, in a case of rigid os, such as the above, is the proper time to interfere ? It would come up in this connexion as an answer to the query, Was, or was not, the use of instruments too long delayed ? I have repeatedly, in the management of cases with rigid cervix, put to the test both the practice of delivering early, and that of delaying as long as possible with safety to the mother and child, and I must say that the more of such cases I see, the more the conviction is forced upon me, that it is safer by far to operate somewhat late than too early. Seeing that, at 10.30 on the 21st, the child's heart was heard to be beating quite distinctly, and the pulse not over 80, it seems to me that no undue delay was made in putting off the operation for two or three hours, in the hope that the pains might return. But such question does not admit of a definite solution applicable to all cases of the kind in the general, as each patient's surroundings and conditions form a law of themselves applicable only to the particular case in hand.

But I must conclude by formulating the chief practical points I have endeavoured to maintain in this paper, and these are as follows :—

1. In occipito-posterior positions, if these are persistent, we may safely assume that we have some pelvic peculiarity or disproportionately large head to deal with, and, as a general rule, all attempts at artificial rectification of the position of the head will prove abortive, and are even dangerous if attempted to be effected by means of levers, forceps, &c.

2. The only exception is when temporary delay is occasioned from accidental displacement of a small head ; in which case one has the alternative of waiting till the normal powers of parturition effect delivery, or of facilitating that event by timely rectification of the head by the hand.

3. In cases which threaten to end as “face to pubes,” and are at the same time decidedly difficult, it is best to pull the head through cautiously, and to abstain from every attempt at rectification of the head—special care being taken to guard the perineum, as the occiput when passing over it, greatly distends it.

4. In cases of obstructed occipito-posterior positions in which the rotation takes place at the outlet of the bony pelvis, while the head is in the grasp of the curved forceps, there is very great danger, in the case of *primiparæ* of the forceps lacerating the soft parts, on account of the oblique position into which they are thrown.

5. To prevent this accident, either, 1st, the blades ought to be cautiously removed, the head fixed in position, and the uterus allowed to finish the expulsion of the head ; or, 2nd, the curved instruments may be reapplied adjusted to the altered relation of parts ; or, 3rd, a

straight short pair may be applied, and the further advance of the head thereby secured.

Obstetric Summary.

Case of Extra-Uterine Pregnancy with a Live Fetus.

The following case occurred in Prof. K. von Braun's clinic at the Vienna General Hospital, and is reported by his assistant, Dr. Bandl, in the *Wiener Med. Woch.* for August 8 :—

"A woman, aged thirty-five, who had already borne two children, applied for admission on November 20, 1871. She last menstruated at the beginning of April. Since the second month of her pregnancy she had been weak and emaciated, and had passed a good while in hospitals. In appearance her abdomen was distended as at full time, and the fetal heart was plainly audible. We need not transcribe the description of the abdominal tumour, an examination of which led Dr. Bandl to pronounce the case one of extra-uterine pregnancy, a diagnosis which was confirmed by Prof. K. von Braun. Further examination with the uterine sound determined the emptiness of its cavity. The woman, though feeble, was able to walk about well after the sounding of the uterus. Gastrotomy, which had been determined upon as giving the woman a chance, had to be abandoned, as pain in the abdomen with febrile action commenced on the 30th, and on December 3rd the patient died. An hour and a half before her death the fetal heart was counted at 100, and its movements could be felt by the hand; and five minutes after she had expired the Cæsarian section was performed, and a living fetus weighing more than eight pounds was removed. For ten minutes its heart beat about sixty per minute, and it made three inspirations; but in spite of all attempts at resuscitation it expired. On the abdominal section being made, from six to eight pounds of fluid were discharged before the fetal membranes were reached.

"The body of the mother was examined next day. From five to six pounds of turbid fluid were discharged, but nowhere could the fetal membranes be discovered. The omentum adhered to the anterior abdominal wall, and the peritoneum was covered with loose pseudo-membranes. By raising up the intestines, the space in which the fetus had lain for so many months became visible, its boundaries consisting chiefly of pseudo-membranous deposits which connected it with the abdominal parietes, the intestines, and the pelvic organs. The uterus, fifteen inches in length, lay on the left side, projecting about three inches above the aperture of the pelvis. The left ovary was of its normal size, while the right, half the size, was, together with the right tube, confounded with a tumour (six inches long, five inches broad, and four inches thick), which in part lay on the venter of the right ilium, and in part projected into the pelvis, adhering to the

posterior wall of the abdomen by means of thick pseudo-membranes. This tumour contained the placenta, and vessels the size of a crow-quill ran to it from the hypogastric. The wall of the tumour consisted of firm layers of substance, three or four lines in thickness; and facing the uterus, just under the level of the aperture of the pelvis, was a round aperture, an inch in size, having a sharp edge, much resembling the falciform process of the fascia lata. Through this passed the funis to the placenta, surrounded by slight adhesions, and from the aperture there projected, so as to surround the funis, delicate corrugated membranes of a yellowish colour, and evidently belonging to an early stage of pregnancy. The placenta, lying in this tumour, formed, with its membranous surface and its surrounding capsule, a cavity with smooth walls.

"It is obvious from the autopsy that at an early period of pregnancy the ovum had burst, the placenta remaining in its original place, and the fetus becoming gradually developed in the cavity of the abdomen. Most surprising is it how well both mother and child supported the process. The woman was never seriously ill until within four days of her death; and she offered an example of what has often been observed—that chronic peritonitis may be passed through without any increase in the rapidity of the pulse or rise of temperature. The history of the case gives no clue to the period when the disruption of the fetus took place, unless some pain which she suffered at the third month, and emaciation which then commenced, can be so regarded. This, too, is about the period which the condition of the membranes around the aperture would suggest, and corresponds to the positions in which the other parts were found to be."—*Med. Times and Gazette.* .

On the Treatment of Puerperal Fever by Alcohol.

Dr. Brochin mentions in the *Gazette des Hôpitaux*, for October 10th, that brandy has been freely employed in Dr. Hardy's wards, by his deputy, Dr. Guibout, in cases of puerperal fever, the antiphlogistic method, bleeding, revulsives, blisters, purgatives, being found inefficacious. At the same time as the brandy was exhibited, however, Dr. Guibout used aromatic fumigations, to bring back the lochial discharges, frictions on the belly with belladonna ointment, hot linseed-meal poultices, and a drink of mugwort. In addition to the foregoing some tinct. aconit. recent. was given with the brandy, and so we are scarcely in a position to estimate, with any degree of exactitude, the precise influence of the latter, which was given in quantities of about seven-and-a-half ounces in the day.

Effect of Blood-letting for the cure of Coma and Convulsion after Labour.

Dr. B. W. Richardson writes in the *Medical Times and Gazette*, "In the close of the year 1847, I was called to the village of Redwinter,

in Essex, to see a young woman who had recently been delivered of a first child. A midwife had attended her, and had rendered every necessary assistance. The labour had been marked by only one striking peculiarity—viz., the enormous quantity of liquor amnii that escaped; the placenta had been thrown off naturally, and the uterus had contracted well. For some days preceding her labour, the woman had been unusually dull and oppressed, and within an hour after the delivery, comatose symptoms with convulsions set in. At the time of my arrival there was complete unconsciousness, with stertorous breathing, strabismus, and active convulsions recurring every fifteen or twenty minutes. The patient was quite unable to swallow, and I found that free counter-irritation, in the way of a turpentine stupe, had been employed without result. To bleed in this case, and to bleed freely, was the practice I had been taught; and therefore I carried out the practice without delay. I drew off one pint of blood, with immediate effect in stopping the convulsions; but as the coma continued, I ventured, at the end of an hour's time, to repeat the venesection, and drew off nearly a pint more blood. After this I waited until, from a restless state resembling the awakening from sleep, the woman became partly conscious. I left directions that she should be fed moderately, and should have no stimulant. I also directed that the child should be put to her breast as soon as she was able to take it by her side. On the following day this patient was perfectly conscious at the time of my visit. She had suffered no return of convulsions, and she was not feebler than women generally are after confinement. She made a rapid and perfect convalescence, without resort to any other medical treatment than the venesection."

Gynecic Summary.

Cylindrical-celled Epithelioma of the Body of the Uterus.—Thromboses with Phlebolithes in the Ovarian Plexuses—Pulmonary Embolism.—Sudden Death.

By Messrs. HAYEM and GRAUX.

A. C., aged seventy-four, was admitted to the Beaujon Hospital on 7th May, 1874. She had been suffering about a fortnight with symptoms of "embarras gastrique," without fever. She has slight dyspnea, which is not explained by an examination of the chest, but there is marked weakness, and all the signs of profound cachexia. She answered so badly to questions put that her previous history and that of present illness cannot be made out. What is certain is, that she has coughed slightly for several months, has pain in the abdomen, and has become much worse during the last fortnight.

The physical signs do not throw any light on her condition beyond showing the saburral state of the digestive organs, the dyspnea and

the cachexia ; which latter, however, presents no special character, no straw-coloured tint, no icteric look. There are a few mucous râles in the chest ; nothing remarkable about the heart.

For a week after admission she improved slightly with the regularity of the hospital régime, so that bad food and poverty may have caused her cachexia to increase, there being no organic trouble to account for it.

Suddenly on the night of the 14th May she had a violent attack of dyspnea, with great oppression, and at the same time considerable uterine hemorrhage.

At the visit on the 15th she sat up in bed, and was obliged to try all sorts of positions in order to breathe. She was becoming asphyxiated, as if she had edema of the glottis, but still air enters freely into her chest, and the respiratory murmur can be heard all over. Then pains in the abdomen and vomiting came on. The os uteri, slightly open, is soft and smooth, and there is no characteristic smell to the bloody fluid issuing from it. The symptoms increased during the day. She had a quieter night, and seemed a little better next day, when, trying to rise in bed, she fell back dead.

Autopsy.—Thorax. At the base of the right lung there is a collection of pus in a small sac, containing about three-quarters of a pint. This diaphragmatic pleurisy seems ancient, judging from the thickness of the walls of the cyst. The other portions of the pleura are healthy, and there are no further adhesions. The lungs are aerated. Approaching the fissures at the root of the lungs : some of the large vessels (pulmonary arteries) are obliterated.

In the heart the trunk of the pulmonary artery and the infundibulum are filled with clots, which reach the bifurcation of the pulmonary artery. Beyond this, in the smaller branches of the artery, the clots abounded, of irregular shapes and sizes, but all smaller than the vessels containing them. These clots are hard and resisting. The liver healthy ; spleen slightly enlarged ; kidneys normal ; brain small, cranial bones very thick. The thyroid gland contained five or six bloody cysts, ranging in size from a hazel nut to a pigeon's egg. These cysts contained stratified clots. There were no coagula in the veins of the superior and inferior extremities.

The ovarian plexuses on each side dilated, forming sinuosities in the thickness of the large ligament, and with varicose enlargements filled with clots and phleboliths. On cutting into these ampullary dilatations, numerous concretions of a fibrinous nature, like those in the pulmonary artery, are set free.

The uterus, uniformly developed, was as large as an orange.

A section in the median line shows the uterine walls to be of equal thickness throughout, and that the cavity of the womb is exactly filled by a pyriform tumour as large as a hen's egg. The tumour is quite enucleated, being moulded to the inside of the womb, without being anywhere adherent. It is yellowish white, and of the consistence of rather elastic dough. Cutting in two shows it to be homogeneous

in structure. The uterus thus emptied presents the following peculiarities. In the first place, the walls are slightly thickened, the peritoneal surface is normal, and nowhere are there any tumours, but the mucous coat seems completely destroyed. In its place the internal face bristles with villousities, and long thin filaments, which here and there reach a length of one or two centimetres, and float when the uterus is placed in water. This lesion is limited to the body of the uterus, its neck being perfectly healthy, as well as its intra-vaginal portion. This primary examination in the fresh state shows the disease to be epithelioma of the uterus.

The tumour is found to be made up of epithelial cells *in great numbers and of all shapes*, but approaching most to the cylindro-conical type. Some of the cells are degenerated, others have become spherical, and are only a mass of granules. The yellowest cells, those on the surface of the tumour, are blended into irregular groups forming plates and fragments of cylinders. The nucleus of these coloured intensely with picro-carmin. In the midst of these elements are masses of fatty granules.

The uterus contains cylindrical epithelial cells of different shapes, and united into blocks. Some of the filaments from the outside of the womb are made up of columns of smooth fibres, around which are epithelial cells.

After hardening in the usual way, sections of the tumour show the following points:—

The whole tumour is made up of epithelial cells, described above; those at the surface hardly altered; the deeper ones very granular. Occasionally there are *laminæ* limited by a fibrinous substance, containing caseous masses. Near the surface the cells are in stratified layers, between which occur beds of a fibrinous nature.

In the uterine parietes the sections were made on the peritoneal surface. The mucous coat has completely disappeared. The filaments described as existing on the inside of the uterus only represent a more advanced stage of a lesion occupying the whole uterine walls. In effect, the following is what is shown by a section from the peritoneal to the inside surface of the uterus. Below the peritoneum a bed of smooth muscular fibres exists of nearly normal thickness. Beyond that are found, between the bundles of smooth fibres, cul-de-sacs filled with cylindrical-celled epithelium, placed in regular order, but small in number in proportion to the base of smooth fibres. Further down there are excavations and *lacunæ*, not filled with epithelial cells, but with degenerated matter. Still deeper, the muscular tissue becomes spongy, and by degrees are seen the formation of the small fibres by which the inside of the uterus is covered. At this level the epithelium becomes very irregular.

Remarks.—First must be noticed the comparative rarity of thromboses of the ovarian plexuses as an origin of embolisms; then, on the other hand, the frequency of occurrence in old people of encysted purulent pleurisy without symptoms. And we must add, that in this

case its occurrence in the costo-diaphragmatic groove on the right side, where dulness would be marked by the liver, explains sufficiently how it escaped observation in spite of minute examination. But above all, the description of cancer merits attention. Cylindrical-celled epithelioma of the uterus is rare. It is easy to follow its growth in the progressive invasion of the tissue in which they are developed. It certainly starts in the tubular glands of the uterus. But what is most remarkable in the uterus is the product the disease gives rise to. This tumour, formed by the epithelium stuck together by a fibrinous exudation, constitutes a free polypus in the cavity of the uterus, which is marked by the symptoms of ordinary polypus, being expelled by the uterus spontaneously, or perhaps needing surgical interference. The tumour may be mistaken for a degenerated polypus, on account of its colour and friability, a microscopical examination being indispensable to discover the malignant nature of the tumour.—*Le Progrès Médical*.

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

"Archives of Dermatology." New York, 1874.

"Transactions of the Clinical Society of London." Vol. vii.

"Steiner's Compendium of Children's Diseases." Translated by Lawson Tait, F.R.C.S. London: J. and A. Churchill, 1874.

"Le iniezioni ipodermiche d'acido fenico nei processi morbosi puerperali." Per Dr. Giuseppe Chiarleoni. Milan, 1874.

"Geschichtliche Untersuchungen über die Glandulæ utriculares," von Dr. Haussmann. Berlin, 1874.

NOTICE.

The Proceedings of the Obstetric Societies of New York and Philadelphia, which appeared in our October number, were abstracted from our excellent contemporary the *American Journal of Obstetrics*. Those of the Societies of Edinburgh and Dublin are abstracted from the Edinburgh and Dublin Medical Journals.

Communications have been received from Dr. Robt. J. Lee, Dr. P. F. Munde, Dr. Carter, Dr. Wiltshire, Dr. Meadows, Dr. Gervis, Dr. Heywood Smith, Dr. Trenholm, Montreal, whose paper shall appear in our next number, and Dr. P. B. Giles, jun.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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Original Communications.

THE INFLUENCE OF POSTURE ON WOMEN.

By J. H. AVELING, M.D.

Physician to the Chelsea Hospital for Women, &c.

CHAPTER II.

DISPLACEMENTS OF THE PELVIC ORGANS PRODUCED BY POSTURE.

(Continued from p. 481.)

FROM the foregoing general considerations it will be seen how wide an influence gravitation must have upon the position, nutrition, and functions of the female pelvic organs. To follow the subject still further satisfactorily, and to enable us thoroughly to appreciate the special effects of posture, it will be necessary to examine more particularly the causes which favour their development and perpetuate their existence, and to study each separately in orderly sequence.

Displacements of the pelvic viscera will therefore first claim consideration. Floating more or less freely in a bony basin, these organs are, even when in a perfectly normal condition, very readily affected by gravitation; but when they become increased in bulk or altered in consistence, this natural tendency is largely augmented.

The postural causes of displacements may be divided into *direct* and *indirect*. In the former the viscera are primarily

influenced by gravitation. In the latter they are secondarily affected by other organs gravitating in their immediate neighbourhood. It must also be admitted that both these factors may act simultaneously in producing displacements.

1. *The Vulva.*

Unless excessively developed, hypertrophied, or burdened with some ponderous growth, the labia, *nymphæ*, and clitoris are almost entirely unaffected by the direct influence of gravitation. When, however, from any cause they become greatly enlarged, their weight causes them to descend, and they become pendulous, or pedunculated, occasionally reaching some distance down the thighs.

Indirectly, displacement of the labia may be caused by the descent of a loop of intestine into them. When in the horizontal position the tumefaction thus produced may subside; but if there be any difficulty in returning the hernial contents, the knee-elbow posture will be found advantageous. Prolapsion of the hymen, when imperforate, may be indirectly caused by the gravitation of menstrual fluid pent up in the vagina and uterus.

2. *The Urethra.*

The urethra is liable to direct displacement by the weight of tumours arising within it, or at its orifice; a prolapsion of its mucous membrane is also liable to occur. The troubles produced by either of these conditions are much aggravated when the patient is erect, but for their cure surgical rather than postural treatment is required. The indirect displacements of the urethra are of great importance, for, owing to the distortion and compression of this little tube, many lives are lost. By retrorsion of the gravid uterus the urethra may be so dragged upwards out of its position as to prevent the flow of urine from the bladder, and in consequence an enormous accumulation sometimes takes place, which, if not detected and withdrawn, may, as it has done too often, end fatally. The same effect may also be produced during gestation and parturition by the gravid uterus descending and compressing the urethra. In both instances posture

bears an important part in their treatment: that required for relieving the former condition will be considered further on, the latter is remedied by the recumbent position with the hips raised.

(a.) *Retrorsion*.—The most remarkable displacement of the urethra is that produced by extreme retrorsion of the bladder. It may be called retrorsion of the urethra, and may exist in varying degrees, its vesical extremity describing an arc of nearly half a circle, of which the meatus urinarius may be considered the centre. In consequence of this displacement the bladder is seldom completely emptied, and the urine thus retained decomposes and causes much mischief. In some cases no urine can be passed until the vesical retrorsion has been replaced. The most suitable postures for performing this are the recumbent or the prostrate.

3. The Bladder.

The bladder alone is perhaps scarcely ever sufficiently heavy to cause its direct displacement: but when it becomes distended with urine, gravitation materially influences its position.

(a.) *Retrorsion*, by some called prolapsion of the bladder (see Fig. 1) is not uncommon, and the frequency with which it is met may be mainly attributed to the three following causes:—

1st. Excessive accumulation and too long retention of urine.

2nd. Prolonged maintenance of the erect or sitting postures.

3rd. Obliteration of the normal angle of pelvic inclination.

Owing to shyness or want of opportunity, a habit is often contracted early in life of retaining the urine for many hours, until at length the bladder becomes amenable to the demands of society, and habituated to over-distension. It is unfor-

FIG. 1.

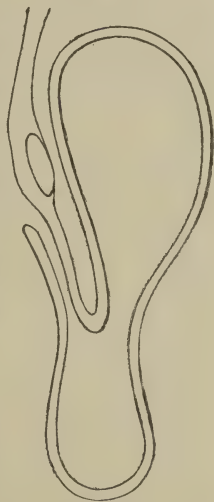


Diagram showing extreme Retrorsion of the Urethra and Bladder.

fortunate that it should be so docile ; for, although its owner may at the time be saved a great deal of discomfort and inconvenience, she is certainly running a great risk of creating evils of a more permanent and distressing character.

The bladder, when filled, is a heavy organ. In the erect posture, when the pelvis is normally inclined, it rests upon the pubes ; but when the pelvis is tilted back, the whole weight of the urine gravitates directly into the pelvic cavity, and presses upon the anterior wall of the vagina. Should this be weakened by disease or child-bearing, it gradually descends and allows the bladder to fall back, describing in its progress an arc of a circle around the pubic bones, to which it is anteriorly attached.

Indirect causes may also accelerate its downward progress, such as prolapsion of the uterus, which is attached to its posterior wall, and superincumbent pressure, whether of visceral or vestmental origin. The preventive or curative remedies are :—

1st. The habit of more frequently emptying the bladder.

2nd. The maintenance of the normal angle of the pelvic inclination when erect or sitting.

3rd. The adoption of the lateral or prone reclining or recumbent postures when at rest.

(b.) *Prolapsion* of the everted bladder may take place through a fistulous opening in the vesico-vaginal septum, and appear of considerable size outside the vulva. In the horizontal position it can be easily replaced, but it immediately reappears when the erect posture is resumed. This condition can of course only be remedied by an operation.

4. *The Ureters.*

Puerperal convulsions are believed by some authorities to have their primary cause in functional derangement of the kidneys and impeded urinary excretion, resulting from pressure of the gravid womb upon the ureters. Dilatation of, and accumulation of urine in the ureters (hydronephrosis) is also caused by the displacement to which they are subjected when the vagina becomes inverted.

15. The Vagina.

The vagina being an exceedingly flexible tube, capable of great distension, and moveable at its upper extremity in every direction, is consequently liable to numerous displacements.

(a.) *Antrorsion*.—This deviation of the upper portion of the vagina anteriorly may be caused by large masses of feces in the rectum, by liquid accumulations or solid tumours in Douglas's pouch, by vaginal enterocele, and by retrorsion of the uterus, whether it be in an unimpregnated or gravid condition.

(b.) *Retrorsion*.—The fundus of the vagina may be forced backwards by the weight of the distended bladder, by antrorsion of the uterus, &c.

(c.) *Sinistrorsion and dextrorsion* of the vaginal roof may be produced by displacements of the fundus uteri in the opposite direction, and by lateral pelvic effusions and tumours.

Although considerable discomfort is sometimes caused by these displacements, they are not generally of much clinical importance, the vagina being so loosely attached to the surrounding organs as to render it capable of being moved in almost any direction without causing appreciable symptoms. The extreme antrorsion of the vagina, produced by retrorsion of the gravid uterus, would not demand so much serious attention were it not that the urethra must necessarily be carried out of its normal position with it. All these deviations of the vagina, however, have probably a practical bearing in connexion with the process of insemination, but this will be considered in a future chapter.

(d.) *Prolapsion*.—This displacement is chiefly due to a relaxed condition of the mucous membrane of the vagina, which, when the patient is in the erect posture, appears external to the vulva, in the form of a thick round ring. It may or may not co-exist with uterine prolapsion.

(e.) *Inversion*.—This displacement of the vagina, called by some writers prolapsion, may be either *partial* or *complete*. It is not uncommonly met with in both forms.

Partial inversion may occur under the direct influence of

gravitation when the walls of the vagina are voluminous or relaxed. The posterior wall is the part most likely to suffer from this displacement. It occurs with the greatest frequency in women who have borne children, and more especially in those cases where the perineum has been ruptured and allowed to remain ununited. It may also be produced by the direct traction of tumours hanging from, or growing within the vaginal walls. These growths sometimes attain a great size, and cause considerable displacement and discomfort. Relief may be obtained by remaining in the horizontal position until suitable measures for their removal or support can be devised.

Partial inversion from indirect causes may arise in several ways. During labour the lax vaginal mucous membrane may be pressed down before the child's head and made to protrude externally. Anything which presses upon the vault or sides of the vagina may have the effect of producing partial inversion. Retrorsion of the bladder (cystocele) is a not unfrequent cause. It may so force down the anterior vaginal wall as to invert a considerable portion of it, and make it appear external to the vulva, in the form of a large rounded tumour. A similar inversion of the posterior wall of the vagina may result from an accumulation of feces in the rectum (rectocele). But it is in the vaginal vault that partial inversions most frequently occur. They may be produced by collections of pus, or by serous or hemorrhagic effusions in the subperitoneal connective tissue, or in the peritoneal cavity ; by the fundus of a flexed uterus ; by an over-distended bladder ; by loops of intestine (vaginal enterocele) ; by an enlarged prolapsed ovary ; by extra-uterine fetation ; and lastly, and more frequently than all these, by partial prolapsion of the uterus.

Most of these displacements are only developed to their full extent by the erect posture. If, therefore, the practitioner would fully appreciate their true importance he must examine his patient when in this attitude. Many of them may entirely disappear when the recumbent position is ordered, and in consequence an error in diagnosis may easily be made.

Complete inversion of the vagina is always the result of indirect gravitatory influences, the chief of which are vesical retrorsion and uterine prolapsion. It may occur suddenly or gradually, but cannot exist without considerable displacement of the other pelvic organs.

Inversion of the vagina, whether partial or complete, is often accompanied with distressing symptoms, the chief of which are feelings of weight, fulness, and bearing-down locally, and discomfort in walking, standing, or sitting. These vary, however, with the different causes of displacement.

Postural treatment is of much service in cases of vaginal inversion. Most of the uneasy symptoms caused by it disappear when the patient reclines or lies down. If in any of its forms replacement should prove difficult, the knee-elbow posture will be found a considerable help. Of course when the inversion is caused by collections either of urine or feces, these must be removed before any attempt at reposition is made.

In returning a completely inverted vagina, its anterior wall, which is the first to protrude, should be the one against which pressure is made. In either lateral recumbent posture the whole viscus may be generally readily replaced, but should any difficulty be experienced the prostrate position may be tried with advantage.

6. *The Uterus.*

For the purposes of this essay it will not be necessary to enter into a minute description of the many ways in which the uterus may be dislocated and contorted. It will be sufficient to consider them generally, and to express by one word a number of conditions which a systematic writer upon uterine displacements might by a subtle process of analysis define by a large number of suitable differential terms—*e.g.*, the various forms of retroflexion and retroversion will be considered under one head, expressed by the word retrorsion.*

* Dextrorsum, sinistrorsum et ad latera ut ad ilia et ad inguina, antrorsum et retrorsum, ut ad vesicam et intestinum.—Hucher, *De perversione uteri*. 1610.

The great mobility of the uterus renders it extremely liable to displacements. It is an organ so lightly tethered in the pelvic cavity that during the whole life of a woman it is never completely at rest. The emptying and filling of the rectum, bladder, and lungs keeps it tossing up and down and to and fro incessantly, and when it is by any means thrown out of its proper place its powers of self-redression are very small. It is not improbable that this constant exercise of the uterus is necessary for its healthy existence. Its veins are without valves, and the circulation within them is doubtless accelerated not only by the contraction of the uterus itself, but by its perpetual and multivagous movements. Slight and temporary displacements of the womb must not therefore be looked upon as abnormal and undesirable. It is only when they become exaggerated or permanent that they are to be regarded as productive of mischief; for then and then only do they begin to have an obstructive influence upon the circulation, and a painfully evident effect upon the health.

(a.) *Prolapsion*.—Although the uterus is held somewhat in its position by the round and broad ligaments, for practical purposes it must be looked upon as principally supported by the vagina, the bladder, and the utero-sacral ligaments. In spite of all these attachments, however, falling of the womb ever has been and still is a very common complaint.

Uterine prolapsion may be divided into *complete* and *incomplete*. In its incomplete form it follows in its descent the curve of the pelvic canal, in its first degree being anteverted, and in the last retroverted. Prolapsion of the uterus is called complete when the whole of it has fallen outside the vulva. In this position it is usually slightly anteverted, as has been proved by repeated gynecometrical observations.*

Whenever the erect posture is assumed, at every inspiration and every step slight uterine prolapsion occurs, but to

* This statement is at variance with the opinions of some authors; it is satisfactory therefore to be able to substantiate it by quoting the following passage from Dr. Julius H. Klob, who, writing about "complete prolapsus uteri," says: "At the lowest extremity of the tumour, the external orifice of the uterus is situated. It is almost always directed somewhat posteriorly—a fact which from observations I am forced to admit with Scanzoni, notwithstanding the contrary might be inferred theoretically."

such a small extent as to be unappreciable, except the organ itself or some of its annexes happen to be affected by a painful disorder. In its healthy unimpregnated condition the weight of the uterus is so insignificant that it seldom descends to any considerable degree by the direct influence of gravitation. In the case of severe falls, however, it may in this manner become seriously prolapsed.

When prolapsion of the uterus is caused directly, the displacement is usually due to increase of its size, produced either by general hypertrophy, pregnancy, sub-involution, or tumours. Its weight, under these circumstances, may be so great as not only to cause it to fall, but to render it capable of dragging down other pelvic organs with it. The most frequent cause of this displacement is the assumption of the erect posture too early after child-bearing. For a month or six weeks after this function the uterus, although daily decreasing in bulk, is far heavier than previous to impregnation, and the vagina and its other pelvic supports being in a relaxed condition, direct gravitatory displacement is extremely liable to occur. It may also result when the body is maintained in the dorsal semi-recumbent position, for in this attitude the brim of the pelvis is held horizontally, and the uterus consequently gravitates directly into the pelvic cavity. This same direct displacement may also happen when the normal pelvic inclination is not maintained whilst the body is erect.

Prolapsion of the uterus is far more frequently produced by indirect than by direct causes. These may act upon it either below, above, or laterally. By organs in its immediate neighbourhood, or at a distance, it may be dragged or pressed towards and through the vaginal orifice. Polypi attached to its cervix, and prolapsion or inversion of the vagina, may drag upon it from below. Pelvic and abdominal tumours and the intestines may press it down from above; any pelvic tumours connected with its sides will have the same effect, but by far the most common cause is retrorsion of the bladder, which, owing to its intimate attachment to the anterior surface of the uterus, cannot fall backwards alone. The weight and hydraulic force of urine in a distended

bladder is not sufficiently considered as a factor in uterine prolapsion; it is, however, one of great importance, which should be constantly kept in view when seeking the causes of this displacement.

FIG. 2.



Diagram showing the Normal
Pelvic Inclination.

FIG. 3.



Diagram showing Debased
Pelvic Inclination.

All prolapsions must be considered more or less as the penalty of an upright posture. Most of them, in fact, are due to the prolonged maintenance of the body erect when at rest, and to the horizontal position of the pelvic inlet when in this attitude. The postural treatment of these displacements must therefore chiefly consist in rectifying pelvic and corporeal malpositions, and in removing the indirect evil gravitatory influence of clothes.

In sitting or standing, if the body be bent or allowed to fall forward, the inclination of the pelvis becomes altered from the normal angle of 54° (Fig. 2) to one of 27° (Fig. 3) or less.

The effect of this change upon the abdominal walls is indicated in diagram No. 3. The abdominal viscera, instead of

being supported, are now abandoned to their own weight, and fall directly upon the uterus. If at the same time the body be subjected to succussion, whether from riding, dancing, &c., the evil is much increased ; and if also the uterus be enlarged, the surface upon which the viscera rests is, of course, greater, and the downward forcing power is proportionately augmented.

The bad effects of pelvic malposition, although not open to the eye, and consequently not much noticed, are nevertheless of serious importance. How many women, when standing, walking, or sitting, either from carelessness, weariness, or affectation, allow the body to drop forward ! In every erect position of the body its natural poise should be maintained. A straight line, falling from the nose to the toe, should, when the body is erect, touch the front part of the pelvis ; when the body is bent forward this same line will be found some inches in advance of its proper position. This latter posture is the one in which poor women stand over the washing-tub or ironing-board, and of all persons these are the most subject to uterine prolapsion.

Pelvic posture depends very much upon the condition of the lumbar portion of the spine. When it is sufficiently arched the line of beauty and the right pelvic inclination is preserved, but if it be straightened the inclination is reduced, and much of the figure's elegance is lost. When this lumbar curve does not exist it may be gained by the use of suitable calisthenic exercises, or by the judicious employment of mechanical agents. No time should be lost in endeavouring to restore it, for the longer the curve remains obliterated the more difficult will it be to reproduce the original degree of flexion. All those muscles which extend the spine and brace back the shoulders, should be regularly and persistently exercised, and if it be considered necessary to aid these by mechanical means, two plans of treatment may be adopted—the direct and the indirect. The direct consists of an apparatus which acts by pressing the shoulders and pelvis backwards, whilst a counter-pressure pad forces forward the lumbar portion of the spine. The indirect consists of a broad belt round the waist, with a weight attached to it in

front, which has the same effect upon the individual as a corpulent abdomen or pregnant uterus would have, causing the shoulders to be thrown back in order to preserve the poise of the body. All mechanical arrangements, however, should only be used as a last resource. Well-directed muscular exercises will, if persevered in, usually accomplish all that is desired. In the personal recollections of Mrs. Somerville an account of the mechanical postural treatment of 1790 is to be found. "At ten years old," she says, "I was sent to a school at Musselburgh, kept by Miss Primrose. A few days after my arrival, although perfectly straight and well made, I was enclosed in stiff stays with a steel busk in front, while above my frock, bands drew my shoulders back till the shoulder-blades met. Then a steel rod with a semicircle which went under the chin was clasped to the steel busk in my stays. In this constrained state I and most of the younger girls had to prepare our lessons."

The postural treatment of uterine prolapsion, as far as the whole body is concerned, depends upon the more or less constant adoption of recumbency. The recumbent posture, with the hips raised, is the best remedial position. In fact many cases of recent standing are often cured by this method alone. It must not, however, be expected to prove efficacious when the displacement is extreme or has existed a long time. Yet, even with these conditions, the horizontal position will be found a valuable auxiliary to any other methods of treatment which it may be found necessary to employ. It must, indeed, be admitted that a considerable portion of the success of those operations which are performed for the cure of prolapsion, is due to the long continued recumbent posture in bed, to which patients must submit during the healing process. Whilst this is progressing, the uterus becomes less hyperemic and bulky, and its supports regain their normal retaining strength. All who suffer, even from a slight degree of prolapsion, should carefully avoid sitting upright or standing for any length of time. They may walk, aided at the time by some suitable artificial support, such as pessaries and abdominal bandages, but when not taking exercise they must recline or lie down as much as possible. Of course these

observations apply with increased force when the uterus is pressed down by tumours or fluids, encysted or free, gravitating immediately upon it.

When the body is erect the influence of dress is of sufficient importance to demand careful attention. Attitude depends upon clothing more than is generally supposed. The stooping position, which has been referred to as so injurious, is often produced by the peculiar feminine vestmental arrangements at present in fashion. The greater part of the burden of a woman's clothing hangs from the posterior part of her body. All the folds of her skirts are carefully disposed behind, and the swaying influence of their weight here is much increased by the leverage power granted them by the numerous ingenious devices adopted for insuring their projection backwards from the body. As the balance can only be maintained by inclining the body in the opposite direction to that in which it is drawn, it must necessarily be bent forward to counterpoise this retroverting influence.

High heels also throw the body out of its proper balance, producing stooping, relaxation of the abdominal walls, and debased pelvic inclination.

But dress, in its strictest sense, has still another potent way of causing mischief—namely, by its weight when suspended from the waist; a weight not inconsiderable in itself, but rendered of much consequence by its persistent action. The bands, from which the garments that women wear hang, are chiefly supported by the abdominal walls, and the viscera beneath them. Ultimately therefore they must compress the pelvic organs, and cause their downward displacement. As a rule, all vestments should be carried by the shoulders. Long robes, falling from them, and girded at the waist, are the least harmful, if not the most beautiful garments a woman can wear. If, however, it is absolutely necessary that her dress should be divided into two portions at the waist, let her, by all means, adopt some method of suspending the lower half from the shoulders. Braces of a very simple and inexpensive kind, having safety hooks, which may be passed through the bands of skirts, are now easily obtainable, and their general adoption is much to be desired. The position

of the waistband must also be considered, for whether it should be high or low is a point of much importance. The fashion of short-waisted dresses is by far the more healthy. Long waists involve abdominal compression by stays, and that closer contact of bands with the walls of the abdomen which enables the downward dragging weight of skirts to exercise its influence most injuriously. The natural position of a woman's waist is neither high nor low, but in that part of her body which happens to be the smallest in circumference. If fashion would only allow this to be the proper place for the waistband, we should not, as now, have the constriction of stays and the gravitation of garments conspiring in the production of prolapsion and its concomitant disorders.

(b.) *Eversion*.—If, when prolapsion of the uterus is complete, the patient persists in passing a large portion of her time in the erect posture, the external os becomes dilated by the vaginal traction upon its circumference, and the process of eversion commences. In cases of old standing this may go on to such an extent as to bring the internal os into view, and it is conceivable that this displacement might become so aggravated as to end in the complete inversion of the organ. The postural treatment of this displacement must be the same as that for prolapsion.

(c.) *Retro-prolapsion*.—A retroverted uterus may descend through and out of the pelvic cavity in consequence of the combined postural causes which produce prolapsion and retrorsion. This position of the uterus outside the vulva is not so common as some suppose. Well-marked instances of it are, however, recorded, and may occasionally be met with.

(d.) *Elongation*.—If, during the occurrence of prolapsion, the sacro-uterine ligaments continue tense and unyielding, the weight of the bladder, when the body is erect, drags down the plastic cervix uteri, and causes it to become attenuated and elongated. The os uteri may therefore in this way be displaced beyond the vulva, and the fundus remain in situ, or only slightly prolapsed.

(e.) *Torsion*.—This displacement is usually attributed to pelvic deformity, but it is probable that the partial rotation of the uterus upon its own axis is more frequently caused by

the gravitation of tumours in or attached to it, the body being at the same time in a horizontal posture. For example, a subperitoneal fibroid, situated in the posterior wall of the fundus would, supposing the patient to lie upon her side eight hours a day, have the effect of twisting the uterus from left to right, thus causing the long transverse diameter of the upper part of the uterus to lie more or less across the pelvis in an antero-posterior direction, the neck remaining in its normal site in consequence of its numerous attachments.

(f.) *Ascension*.—When in the lateral recumbent posture the pelvis is tilted over, the uterus, relieved from the pressure of the abdominal viscera, gravitates directly away from the vulva, and in this way, as has been already shown, any uterine depression which may have taken place during the day is remedied at night. When sitting, the pressure of the surface sat upon forces up the yielding floor of the pelvic cavity, and thus indirectly causes the organs contained in it to rise. This is an admirable provision for the purpose of counteracting the prolapsing influence of sitting upright. Its principle may be advantageously adopted in treating prolapsions, pressure being made from below by pads which are supported from the waist. Some women find much relief from this upward pressure, and endeavour to increase it when sitting by holding the sides of the chair, and drawing themselves tightly down upon the seat.

In early pregnancy and uterine enlargements it is sometimes highly desirable that the uterus, in consequence of the distressing symptoms which it is producing, should be made to ascend into the abdominal cavity. For these cases the knee-elbow position will be found to favour the manipulations of the operator.

(g.) *Antroversion*.—The uterus being in its natural position inclined forwards, it is easy to understand how, when the body is erect, or in a stooping posture, this organ may, by direct gravitation, be caused to fall over too far anteriorly. This tendency is much increased when the uterus becomes augmented in bulk by pregnancy and morbid growths, and still more so if these growths exist in the fore part of the uterine body, and the pelvis chances to be unusually capa-

cious. This and similar displacements occur much more readily when the uterus is in a soft and flabby condition. And when in this state it may be found one day dislocated in one way, and another day in exactly the opposite direction. The character of the deviation is also influenced by the consistency of the uterus. When it preserves its natural firmness the displacement is a version; when it is in a softened condition it is liable to become a flexion.

Indirectly the normally antroverted uterus is liable to further antrorsion as a consequence of any superincumbent pressure—*e.g.*, abdominal viscera falling upon it, owing to debased pelvic inclination, or ovarian and abdominal tumours, or an overloaded rectum acting in the same manner. Straining, muscular efforts, and falls when in an erect or sitting posture may also indirectly produce antrorsion. This displacement of the completely prolapsed uterus is caused by the upholding power of the utero-sacral ligaments behind, and the dragging-down influence of the retrorsed bladder. The postural remedy for this displacement is the dorsal decubitus. Simply reclining on the back is of little use. The shoulders must be maintained when the body is at rest on a level with the hips. Two things may be recommended which on nearly every other occasion should be avoided—namely, lying upon the back, and allowing the urine to accumulate in the bladder, for its distension and weight both have a redressing effect.

(h.) *Retrorsion*.—This displacement of the uterus may occur directly either from its own weight when in the impregnated or unimpregnated condition, or from the gravitation of tumours connected with it. If from increased weight or relaxed supports a tendency to uterine deviation should exist, retrorsion will be much favoured by the dorsal recumbent and reclining postures. The practice which some ignorant nurses and midwives enforce of keeping women after their confinements continually lying upon their backs is a very constant cause of this displacement. The uterus at such time being soft and heavy is consequently more readily affected by gravitatory influences, and should retrorsion take place during the process of involution the organ is liable to

become permanently distorted. This subject, however, will be more fully referred to in another chapter.

In all cases of prolapsion in which the uterus remains in the pelvis retrorsion takes place and increases in degree in exact proportion to the amount of downward displacement. Should prolapsion be due, as it generally is, to indirect causes, and more particularly to superincumbent pressure, and the uterus be retarded in its descent by its numerous suspensory attachments, retrorsion becomes much aggravated, and the uterus, instead of having its long diameter parallel to the pelvic axis, becomes so much dislocated as to lie directly across it ; and if the uterus be at the same time in a flaccid condition the deviation becomes complicated by the organ bending upon itself and producing various degrees of flexion. Of all the indirect causes of retrorsion, however, distension of the bladder must be looked upon as the most frequent, for the bulk of accumulated urine forces the body of the uterus backwards, and causes prolapsion of the whole organ into or through the pelvis. But in whatever way retrorsion may originate, whenever it has been once established, all the superincumbent causes mentioned under Antorsion of the Uterus come into effective play, and tend to increase and perpetuate the displacement.

The postural treatment of retrorsion consists in lying or reclining upon the sides, or, still better, upon the face. Prostration also is an admirable attitude. A remarkable anecdote in support of this, is told of a lady suffering from retrorsion, who made her complaint the subject of prayer, and was surprised to find it answered only whilst she was upon her knees. All pain ceased during the devotional act—that is, when she unconsciously adopted the proper postural treatment. It is also of great importance that the condition of the bladder should be attended to. The urine should not be allowed to collect in it in large quantities. All superincumbent abdominal pressure must be carefully avoided. The weight of the clothes should be borne on the shoulders ; and if the abdominal viscera be loaded with fat, or from any cause abnormally heavy, proper fitting bandages and special pessaries will be required.

(i.) *Dextrorsion and Sinistrorsion.*—When lateral obliquity of the uterus, whether congenital or acquired, already exists, there must be a tendency for the organ to fall still further towards the side upon which it inclines. This tendency is of course much increased when the uterus becomes in any way enlarged. Fibroid tumours and other growths in or attached to the side of the uterus will, when the patient is erect, produce by gravitation lateral displacement. The same may also result from relaxation of the ligaments of one side, from the habit of sleeping constantly on the same side, or from violent falls upon the side. All lateral displacements are exaggerated, when the body is erect, by superincumbent pressure; they are also caused or increased by lateral tilting of the pelvis, produced by a short leg, curved spine, or any other cause.

These displacements are not, as a rule, accompanied by such unpleasant symptoms as the antero-posterior dislocations—in fact they may, and often do, exist without attracting the attention of the patient, or demanding medical interference. Dextrorsion is the more common, and this is probably due to the fact already mentioned, that most women sleep upon their right sides, and spend a third of their lives in this posture. If painful symptoms be produced by dextrorsion or sinistrorsion, they may be greatly relieved by postural treatment, the character of which must be obvious, the patient being requested to recline or lie down upon the opposite side to that towards which the uterus falls. The relief consequent upon this simple expedient is sometimes remarkable.

(k.) *Inversion.*—When the uterus is in a normal condition it is very doubtful whether this displacement can be produced by the direct effects of gravitation. It has been supposed that it may take place when the uterus is soft and distended, but it must be a very exceptional circumstance. The weight of a tumour or polypus hanging from the fundus may, by constantly dragging it down, at length produce complete inversion, and this appears to be the only way in which this displacement of the unimpregnated organ can occur. On the same principle inversion of the uterus may take place

immediately after delivery, the woman being in an erect or sitting posture, and the weight of the child dragging, by the cord and placenta, the fundus uteri forcibly down through the open cervix into the vagina. It may also occur after labour in consequence of pressure from above, caused by the weight of the abdominal viscera, and it has even been known to have taken place after death, the fundus uteri being forced downwards by the accumulation of gases in the abdomen.

Whatever may have been the cause of this accident it is of the greatest consequence that it should be remedied as soon as possible, for every hour of delay makes the proceeding more difficult. Posture may perhaps be of some assistance to the operator, and if any particular one be adopted, that upon the knees and elbows will be the most appropriate.

(1.) *Protrusion*.—Occasionally the uterus is found to escape through various openings in the walls of the abdominal and pelvic cavities. These protrusions or uterine hernias are divided into inguinal, femoral, ischiatic, infra-pubic, and ventral. In the last form the uterus escapes through an accidental separation of the abdominal muscles. These displacements may result from the direct influence of gravitation, or, as is more generally the case, indirectly by the weight of superincumbent viscera. Additional impetus to these gravitatory influences may be caused by straining, falls, or excessive abdominal compression. Should the uterus be impregnated when thus displaced, the direct effects of gravitation are very much increased.

In reducing all protrusions of the uterus the operator will be much assisted by placing the patient in such a position as to favour their return. In following out this direction it may be necessary, in order to obtain the full aid of gravitation, to place the patient in apparently strange positions; but, however extraordinary these may be, they should nevertheless be unhesitatingly adopted.

7. The Fallopian Tubes.

Unless enlarged by disease these tubes are scarcely of sufficient weight to suffer much displacement from the direct effects of gravitation; indirectly, however, they are not unfrequently liable to considerable dislocation.

(a.) *Prolapsion, &c.*—The Fallopian tubes are dragged down by the uterus whenever it becomes prolapsed or inverted ; they may also be caused to descend by ovarian prolapsion, or by tubal pregnancy, or in fact any disease which causes their enlargement.

It may be generally stated that all the displacements of the ovaries and uterus cause corresponding movements in the tubes ; they may be dragged to either side, backwards or forwards, or they may even be protruded with uterine or ovarian hernias.

(b.) *Elongation.*—When a Fallopian tube is displaced by an ovary dragging upon one end of it, the other being held in situ by the uterus, or vice versâ, a stretching or elongating process takes place, which may proceed to such an extent as to produce rupture and division of the tube.

The postural treatment of these displacements is identical with that of the dislocated organs which cause them.

8. *The Ovaries.*

Floating about at anchor in the pelvic basin, the ovaries readily drift in every direction, in obedience to the various forces which act upon them. In their normal condition, owing to their peculiar function, they are liable to considerable structural variations, and, in consequence of these, they may at one time be small and anemic, and at another large and hyperemic. In this latter condition they are, from their increased weight, more liable to be affected by gravitation.

(a.) *Prolapsion.*—This is the most frequent form of displacement to which the ovaries are liable. Its occurrence is favoured by debased pelvic inclination, relaxation of their ligaments and suspending structures, long continuance of the erect posture, or any diseased condition which augments their bulk. Indirectly, they may be prolapsed by the superincumbent pressure of abdominal viscera, tumours, &c., or they may be drawn down by the uterus when in a state of prolapsion or inversion.

The postural treatment of this displacement is ably described by Dr. Rigby as follows : “We shall find the prone couch not only a valuable means for giving ease to the

patient, but of gradually restoring the displaced organ to its natural position. The position on the knees and elbows for a minute or two before assuming the ordinary prone position is frequently of great value, and the patient becomes instantly aware that the ovary has moved by the sudden relief which she now experiences."

(b.) *Ascension*.—It has been stated that the liability to prolapsion is increased when the ovaries are enlarged by any physiological or morbid process. But there is a limit to this rule, for when they become too large to be contained in the pelvic cavity, a movement in the opposite direction takes place, and the displacement in this case must be called ascension of the ovary. Ovaries, when enormously enlarged, reach, during the recumbent posture, the very summit of the abdominal cavity, pressing upon and impeding the action of the thoracic viscera, and obliging the patient, as the only mode of obtaining relief, to spend day and night with her body in an almost upright position. The ovaries may also be dragged upwards by the uterus when far advanced in pregnancy or enlarged by morbid growths.

(c.) *Protrusion*.—The causes which produce prolapsion may also effect protrusion. The various forms of this displacement have been divided into inguinal, crural, ischiatic, and ventral.

In their treatment posture may be found useful not only in replacing, but in retaining the ovary in its proper position. The suitable posture in each case will suggest itself to the operator.

9. *The Rectum.*

This being an important pelvic organ, and intimately connected with or related to the female generative organs, some mention of its displacements seems necessary.

(a.) *Prolapsion*.—Direct prolapsion of the rectum is usually caused by exertion or straining when the body is erect. A hyperemic condition of the mucous membrane and a relaxed condition of the sphincter favour its occurrence. Rectal prolapsion also accompanies partial inversion of the posterior vaginal wall (rectocele), and it may also be caused by uterine prolapsion.

The knee-elbow posture will be found the best for reducing these displacements, and the maintenance of the recumbent position will materially assist any other special treatment which may be required.

To be continued.

A CASE SHOWING THE VALUE OF EXTERNAL MANIPULATION WHEN THE INTERNAL EXAMINATION WAS UNSATISFACTORY.

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THE following case is, I think, interesting, both on account of its rarity, and the illustration it affords of the value of external examinations, when vaginal are either doubtful or not to be ascertained:—

Mrs. L., aged twenty-seven, presented herself at our house on July 20th, for the purpose of requesting our attendance at her confinement, which she expected about the second week in November. The last catamenia ceased January 21st, and she quickened about the middle of June, but is not quite sure which day. She has had three previous labours, each good, but losing much blood every time. Last labour she flooded tremendously, soaking through the bed into the floor, and was not expected to recover. At present she is in good health, but troubled a little with hemorrhoids, and has the appearance of a woman at full time; has had no sickness this pregnancy.

Nov. 5th.—Was summoned to attend her at 5.37 this morning; on arrival found that she had been having pains since 11.30 P.M., and, although frequent, they were not strong or continuous, chiefly confined to the abdomen; the pulse was good, and the woman in fair spirits but much larger than most women are. On examination I found the os high up, about the size of a florin, dilatable, and the presenting part above the pelvis coming down with each pain, but receding during the intervals, the part presenting

the shape of the cranium ; but there was a soft feel to the finger, very like that of a breech, in addition to which there was either a hand or foot to be felt ; there was also considerable edema of the vulva and vagina, with a semi-elastic swelling about the size of a walnut in the floor of the vagina. Not satisfied with this, I placed the woman on her back, and after a little time detected the fetal heart beating feebly, about two inches below the navel, and the same from the middle line on the left side. Careful palpation assured me there was only one child, and that, taken with the position of the fetal heart, either to be second or fourth cranial position. After keeping the woman half an hour on her back, during which she had five pains, I applied a binder, and again turned her on her left side, when I found the os the size of a crownpiece and dilatable, the presenting part just in the pelvis, but the vaginal swelling increased. With a probe I ruptured the membranes, and about half a pint of water escaped. I was then surprised to find a second bag presenting, and now I could clearly ascertain that it was a fourth position, and that the left hand was also presenting. I held the hand back for four pains, when it remained above the head. A great quantity of liquor amnii escaped with each pain, yet the head did not advance, and the vaginal tumour still increased. I again placed the woman on her back, tightened the binder, and gave some nourishment. At 9.45 I made another examination, when although the pains had been frequent, the head had again receded. As the woman by this time was very weary, I determined to apply forceps. This I did easily, using Barnes's ; there was no difficulty in locking, and a little traction brought the head down upon the tumour, when I found I could not finish extraction without rupturing this. Preferring a clean-cut wound, I drew a knife across it and turned out a clot ; there was a little hemorrhage, which pressure of my finger stopped. The head was then brought down, but notwithstanding the greatest care the perineum was lacerated. As soon as the head was delivered I gave a dose of ergot and opium, and the nurse applied firm pressure over the uterus. The child was expelled, and in eight minutes, finding the placenta in

the vagina, I removed it. External pressure was kept up for more than forty minutes, when as there was no hemorrhage, and the pulse being quiet, I put a silver wire suture in the perineum, applied a firm binder, and gave nourishment. The suture was removed the seventh day, the woman rose the ninth, and made an excellent recovery. This case is to me of great interest, first, on account of its having two distinct bags of water. This I verified on examining the placenta, and this caused the doubt as to what the presentation was. Secondly, the value of external examination in settling this doubt. I have practised it much, but never so satisfactorily as in this instance; and generally in previous cases I have merely used it when I was quite certain as to the presentation. Thirdly, the result in this case points out that incising and turning out clots may be done at once: pressure of the fingers and the after-coming head restraining hemorrhage, the lesion being limited and under control, instead of uncertain as it must be if ruptured by the descending cranium. Fourthly, the value of pressure as a preventive of hemorrhage, coupled to a slow emptying of the uterus when that organ has been over-distended and labour prolonged. The use of the ergot, though orthodox, is uncertain, its value in hemorrhage being lessened by the sickness it often produces if repeated. Fifthly, the head did not rotate naturally, and was delivered with the forehead under the pubes; this I think occurs as frequently as rotation does, in all cases which present in either the third or fourth position, if the head be seized by the forceps above or high up in the pelvis.

CHRONIC INVERSION OF THE UTERUS OF FIVE YEARS' DURATION—OPERATION— RECOVERY.

By WILLIAM G. KEMP, L.R.C.P. Lond., of Wellington,
New Zealand.

MRS. C., aged thirty, came under my notice in December, 1873, complaining of severe floodings coming on every two

or three weeks and lasting for from seven to ten days. She dates her illness from the birth of her last child, five years ago. She is much reduced in strength, and has evidently lost much blood, as her lips and face are almost white. Has been laid up several times, but never got more than temporary relief. Examination detected a smooth round body in vagina, continuous above with the vaginal walls; and complete absence of any enlargement in hypogastrium, together with other symptoms, showed that the case was one of inversion. Having made two attempts to reduce the uterus without success, I determined to incise the cervix.

On February 20th, 1874, chloroform was given, and the uterus being drawn down with double loop of tape, I incised the cervix in two places, but failed to reduce it. As there was no constitutional or local disturbance, on February 25th I again incised the neck in two places—one incision in front, the other behind, but more freely than before, and without any difficulty the fundus passed through the os in about a minute. There was no loss of blood or laceration. Suppos. morphia gr. $\frac{1}{2}$ was introduced into rectum. From the time of the operation there was no constitutional disturbance whatever; pulse never more than 72; very slight tenderness in hypogastrium for first week. I kept her in bed for a week; and then, everything being in proper place, allowed her to get up, and at the end of a fortnight she went away for change of air. She has menstruated regularly since, at intervals of a month, lasting three or four days, and is stronger and heartier than she has been for years.

Reports of Hospital Practice.

WOMEN'S HOSPITAL OF MONTREAL.

A CASE OF EXCISION OF THE UTERUS AND ITS APPENDAGES FOR FIBRO-CYSTIC TUMOUR, TOGETHER WITH THE TUMOUR.

Performed by Dr. E. H. TRENHOLME,

Professor of Midwifery and Diseases of Women and Children, Bishop's College ;
Attending Physician to the Women's Hospital of Montreal ; Fellow of the
Obstetrical Society of London, &c.

*The Operation is Reported by Mr. JOHN F. DAVIS, Student of Bishop's College,
Montreal.*

THE following synopsis of a report of a case of extirpation of the whole uterus and both ovaries for fibro-cystic tumour is furnished to your Journal in the hope that it may be of interest to the profession, and, to some extent, induce surgeons to regard the operation with more favour than it has heretofore received, and also encourage attempts to save life when thus placed in imminent danger.

The patient, first seen by me in October, 1873, is a medium-sized, well-developed, dark-complexioned, healthy, unmarried woman of thirty-four years ; she is spare of flesh, has a good appetite, and sleeps well.

The tumour from which she seeks to be relieved first made itself known in September, 1870, after what her attendant called "an attack of inflammation of the bladder, and gravel." It grew steadily and slowly for the next year, when it rapidly increased in size, but never gave her any inconvenience till February, 1873, when she had a slight attack of menorrhagia. Hemorrhage again occurred in May, and at two or three times during the same year, the last of which was in July, 1873. Patient enjoys life, and has little trouble except from weight of tumour and at the menstrual periods, when there is a good deal of flatulence and pain, which passes off as soon as the flow is well established.

The tumour fills the abdominal cavity, is firm to the

touch, and the parietes over it are freely moveable. There appears to be a fluid cyst at upper part, between umbilicus and ensiform cartilage, where there is much tenderness. Percussion gives a tympanitic note in either lumbar region, but over the growth the note is uniformly dull. *Measurements.*—At the level of umbilicus, 41 inches; ensiform cartilage to umbilicus, 9 inches; umbilicus to pubis, 11 inches; right anterior superior spinous process to umbilicus, $10\frac{1}{2}$ inches; left ditto, $9\frac{1}{2}$ inches.

The speculum failed to bring the os into view; in fact, the finger could reach it but in one position—viz., leaning over the back of a chair, with the right leg raised a few inches from the ground. The os was then felt above the brim of the pelvis toward the left groin.

The vagina was much elongated, and, as the position of the os indicates, was directed toward the left side of the pelvis.

During menstruation the right ovary could be traced out on the left side of the tumour on a level with umbilicus. The bladder, when distended with urine, could be felt over the tumour in the median line for about three inches above the crest of pubis.

Diagnosis.—From ascertained facts, concluded it was a fibro-cystic tumour of the uterus, probably springing out from the posterior and lateral part of the body of the organ.

Prognosis.—As suppuration had not supervened, and no dangerous symptoms were manifested, it was thought life might be enjoyed for months to come; and although the patient was anxious and willing to undergo the operation of its excision such a course was not deemed warrantable, and she was sent home to enjoy herself till life became a burden, or some serious symptom demanding the operation presented itself.

Progressive Symptoms.—Patient went on well as usual up to end of January, 1874, when she noticed, for the first time, an offensive vaginal discharge, which gradually increased in quantity up to the end of February, when she had what she calls a congestive chill, that lasted for half an hour. This was followed by a high fever for about three hours, when a profuse

perspiration supervened, which lasted ten hours, and was finally followed by a severe headache, that lasted a week. From this time there has been increased pain during menstruation, continuous and offensive vaginal discharge, night sweats, and a bad odour and taste in the mouth. After this attack the patient's strength and flesh rapidly diminished, and in a week or two she was reduced almost to a skeleton. Towards the end of April, and during the first part of May, the patient recovered sufficient strength to come to Montreal, when she entered the Women's Hospital on 28th May. Weight, 137½ lbs. Abdominal measurements were now as follows:—Round the body, on level with umbilicus, 41½ inches; ensiform cartilage to umbilicus, 10 inches; umbilicus to pubis, 12 inches; right anterior superior spinal process to umbilicus, 12 inches; left ditto, 11 inches. Compared with October last there is, on an average, an increase of about one inch in each of these measurements.

Attention was directed to the general health of the patient from the date of admission till 12th June, 1874, the day of the operation. The urine was high-coloured and scanty, for which the effervescing carbonate of lithia was administered for about a week with satisfactory results.

The Operation.—Anesthesia was induced by chloroform, and continued by sulphuric ether. An exploratory incision to the extent of about six inches was made in the linea alba with the customary precautions. Every point of hemorrhage was controlled at once by Péan's forceps or fine hempen ligatures. An attempt was made to puncture the tumour at a point where indistinct fluctuation seemed present, and draw off fluid, which failed. The incision was then extended downward, to within an inch of the pubis, care being taken to avoid injuring the bladder; the incision was also extended upward about three inches to one side and above the umbilicus, in all about fourteen inches. The tumour was partly raised, and placed outside of the abdominal walls by gently pressing the latter below the tumour. The adhesions and vascular connexions, which were very extensive on the posterior and lower part of the mass, among which was an attachment of the bowel to the extent of about ten inches,

were chiefly divided by the actual cautery and knife, every point of hemorrhage being secured by fine hempen ligatures, cut off close to the knot. The uterine ligaments were divided by the actual cautery, but this did not prevent persistent hemorrhage from the right ovarian artery, which was ligated with considerable difficulty. The tumour being sufficiently freed to be raised out of the pelvis, was then carefully separated from the neck of the uterus, and the latter enclosed in the wire *écraseur*, and then divided a little above the wire, at about one inch from the os, by the knife. The tumour being removed, the cavities of the pelvis and abdomen were most carefully sponged out with carbolized sponges and carbolized water. The edges of the incision were brought together by eight deep interrupted sutures of hempen thread, and superficially by the same number of horse-hair sutures. The pedicle was transfixed crosswise of the abdomen by two steel needles, one passing through the centre of the pedicle, and the other—a figure of eight entire—embracing the edges of the wound and the upper edge of the pedicle in its grasp. Carbolized lint was placed under the ends of the needles and over the wound. Broad straps of adhesive plaster were placed over the abdomen from side to side; the abdomen was covered with cotton-wool, and secured in place by a broad flannel roller. At the completion of the operation, which occupied two hours and a quarter, the patient was in a very alarming state, the pulse alternately flagging and reviving; but by a little brandy and water she rallied, and was shortly afterwards removed to her bed. A quarter grain of morphine was given, but as it induced vomiting it was not repeated. Tincture of aconite was given with the effect of checking the emesis and encouraging the action of the skin.

It may here be remarked that to save time and repetitions the temperature and pulse will be found indicated in the accompanying slip of paragraphs and diagram:—

1st day.—At 10 P.M., as skin was acting well and pulse quick, *veratrum viride* and brandy were given, but had to be omitted, as they also caused vomiting.

2nd day.—At 1 A.M. patient sleeping quietly for the last three-quarters of an hour. After this wind in bowels

began to trouble ; there was nausea and belching of wind. 11 A.M., nausea continuing, gave tr. capsici. Had a good afternoon, sleeping greater part of the time. Flatus escaped per anum at 9 P.M. I need not say the urine was drawn off every four or five hours till the evening of the third day, when she voided it herself without difficulty. At this time the bowels moved naturally, and flatus escaped freely. Heretofore she had taken iced water and ice only, but now took beef-tea with relish. From this time nothing worthy of special attention occurred till the afternoon of the fourth day, when she began to be troubled with phlegm in throat, and a tendency to cough (the result of exposure to a draught of wind the day before the operation), which gave much distress and pain at the site of pedicle. This distressing cough was held in check and much relieved by tr. nucis vomicæ.

5th day was very warm, and caused a good deal of prostration. Did not sleep much last night on account of bad dreams. As the skin was dry and hot, gave tr. aconite.

6th day.—Cough easier—slept well all night. The urine passes freely, but the last few drops is followed by slight pain in bladder. On the whole feels so well that she says “she feels as though she should be out of bed.”

7th day.—There is a small pocket of pus at the site of the upper needle of the pedicle ; urine somewhat smoky-coloured, but abundant and free. Gave lithia water twice a day.

8th day.—Removed two deep sutures—all going on well ; urine normal.

9th day, 8 A.M.—Passed a fair night. Urine free, but slightly smoky again ; stump separating fast ; removed écraseur, but left wire around the pedicle *in situ*. Had a copious perspiration toward morning. 10 P.M.—Pedicle with écraseur wire and needle came away while dressing. From shape of slough and depth of wound, judge that the whole of the cervix uteri came away.

10th day.—There is a copious purulent discharge from the wound, also a discharge per vaginam. Cavity seems very deep, and fear detachment of pedicle from abdominal walls on account of retraction of vagina. The weather being extremely hot the patient feels somewhat prostrated.

12th day.—Removed adhesive plaster ; continued roller only ; wound granulating and filling up rapidly.

July 2nd, 20th day.—Sat up in bed for a short time. Discovered a pocket of pus in abdominal parietes on the right side of wound, which empties freely into cavity of wound.

July 7th, 26th day.—Got out of bed and sat up in easy chair.

July 9th.—Pocket of pus has formed in left side, that on the right side has disappeared.

July 13th.—Pocket of pus on left side has disappeared.

July 14th.—Walked across her room for first time.

July 17th.—Walked down town as far as Victoria Square (300 yards). Feels well, but weak. Weighs $32\frac{1}{2}$ lbs. less than before the operation.

From this date patient has continued to improve in flesh and strength, and is now, 15th October, quite well, and $19\frac{1}{2}$ lbs. heavier than on the 1st August last.

The tumour weighs 10 lbs., and springs from the centre of



1. The Uterus. 2. The Ovaries. 3. Round Ligament. 4. Paper stuck into the Cervical Canal of the Uterus.

the back part of the body of the uterus, somewhat to the left side. A No. 10 sound can be passed through the os, and then through a fistulous opening communicating with a large cyst in the centre of the growth, but nearer the upper border. This cyst will hold about 32 oz. fluid, and when removed was full of pus. The tumour itself is of a dense fibroid character, though inseparably connected with the uterus.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

JANUARY, 1875.

THE CHAMBERLENS, PETER OR PAUL?

AT the last meeting of the Obstetrical Society of London the President exhibited to the Fellows a portrait of one of the Chamberlens. It is a copy of a not very rare engraving, and represents a gentleman of about sixty years of age, with a very intellectual face and head, and long white hair. He is dressed in the costume of a Doctor of Medicine, and beneath is written, "Paul Chamberlin, M.D., 1658." Now Paul Chamberlen was a notorious quack, who promoted the sale of the celebrated anodyne necklace for children's teeth, women in labour, and distempers of the head, and who pretended to believe so completely in the efficacy of its "alcalious atoms and effluvias" that he constantly wore one on each leg by way of garters to keep off cramp. If this likeness were really that of Paul, our interest in it would be very slight; but it is evident some mistake has been made, and we think it will not be difficult to prove that the person represented is Peter, the inventor of the midwifery forceps. The date of the portrait, 1658, and the apparent age of the person portrayed, are so at variance with facts that it is impossible to reconcile them. Paul Chamberlen, not Chamberlin,

as it is spelt under the engraving, was the second son of Peter, who was born in 1601. The age of Paul therefore in 1658 would be about thirty, and that of Peter fifty-seven. No one could imagine the portrait to be the likeness of a young man, but all would probably agree in admitting that it might represent a man of about sixty, or even older. The error in naming this portrait has probably been made by the engraver, for his sketch, taken from the original painting, is in the possession of the Royal Medico-Chirurgical Society, and has the same inscription. Medically the Chamberlen family is as interesting as it is puzzling genealogically. Four generations were physicians and surgeons, and three of them were of sufficient eminence to be appointed in ordinary to the reigning monarchs. First there were two surgeons: Peter the elder, surgeon to Queen Anne, wife of James I., and Peter the younger, a surgeon in Blackfriars, who married Sarah, the daughter of William de Laune, minister and physician. Peter junior had a son Peter, the forceps inventor, and he had three sons who took the degree of Doctor of Medicine—Hugh, Paul, and John. Hugh had a son, also called Hugh, a celebrated physician, who was buried in Westminster Abbey, where a handsome tomb to his memory, erected by the Duke of Buckingham, may be seen. From this slight sketch of their pedigree it will be easily understood how readily mistakes may arise. It still, however, remains a mystery how the name of Paul should have supplanted that of Peter, for the instance of the portrait is not unique. In the systematic writings on midwifery of some of our most reliable authorities Paul Chamberlen is stated to be the inventor of the forceps. This error has been completely exploded by the finding of the original models in Peter's house after his death, and by the fact that whereas Paul was a miserable quack, Peter was a man of great genius, and the patentee of several inventions. All the medical members of the Chamberlen family practised as obstetricians. The history of its four generations would therefore embrace a period of more than a hundred years—a time most interesting to us, inasmuch as during it midwifery was rescued from the hands of ignorant women and

placed on a scientific basis. A biographical memoir of this interesting family seems to be a desideratum, not only that we may be able to know Paul from Peter, but as an important chapter in the history of our branch of the profession.

Notices and Reviews of Books.

Die Krankheiten des weiblichen Geschlechtes. Von Dr. H. BEIGEL. In two Parts. Part I. Erlangen, 1874. Pp. 603.

The Diseases of Women. By Dr. H. BEIGEL. Part I.

THIS, the first volume of Dr. Hermann Beigel's work on the Diseases of Women, embraces the general part of the subject—the physiology, pathology, and therapeutics of menstruation, and the diseases of the ovary. The work commences with an introductory chapter on the sexual life of woman and the influences to which it is subject. Then the anatomy of the organs of generation is entered upon. After a few general remarks, each organ is separately described, and in a very complete manner. This part is remarkably well illustrated by drawings and engravings gathered from various sources, and copious reference is made to the latest views on any disputed points in histology, &c. Then follow chapters or physiological remarks on the changes in the organs of generation during pregnancy and menstruation, and on the medico-legal determination of virginity, which last, we think, might be relegated to a work on forensic medicine. In the next chapter the subject of general gynecological diagnosis is treated at great length, and the remarks are illustrated by numerous diagrams, as, for instance, the section on the speculum. We are, however, somewhat surprised to find that the author, under the section Auscultation, states that the fetal heart sound is synchronous with that of the mother and beats about 130 in the minute. The chapter on general gynecological therapeutics contains a good account of the various methods of mechanical treatment. This is a strong point with the author, and he hopes that by his work he may

be able to introduce more widely into Germany the mechanical treatment of uterine diseases.

The special part of the subject begins with a chapter on menstruation, its physiology, anomalies, and pathology. The author opposes the ovulation theory, and denies that there is any connexion between ovulation and menstruation, and considers menstruation to be a from time to time repeated impulse through which, in consequence of an overfilling of the capillary vessels of the uterus, and probably of the tubes also, hemorrhage occurs. He mentions two new cases of menstruation occurring during pregnancy. Under the heading of Pathology we have dysmenorrhea divided into a nervous, an intermittent, and a membranous form.

The section on the diseases of the ovaries embraces the following subjects:—Absence of the ovary and deficient development; inflammation of the ovary, acute and chronic; misplacement and prolapse of the ovary, and tumours of the ovary. This section is exceedingly well done. Reference is made to the latest writers of authority on the various points discussed. On the whole we are pleased with the work. One marked feature is the copious references to English and American as well as German authorities; and the author seems to have found out any case, wherever reported, which would support him in his statements. This has, however, to some extent increased the size of the volume, and we think that in some instances the quotations might as well have been omitted. The work is well got up, and the diagrams and illustrations are good and well executed. There are, as might be expected, many things to be pointed out as mistakes and errors, but we doubt not that the author will correct all such in his second edition.

The Pathology and Treatment of Diseases of the Ovaries ;
being the Hastings Prize Essay of 1873. By LAWSON
TAIT, F.R.C.S. Ed. and Eng., &c. Smith, Elder, and Co.
Pp. 67.

We are glad to see that Mr. Lawson Tait has published his essay in a separate pamphlet, for in these days of big books

on great subjects it is gratifying to find a treatise giving so much valuable matter in so condensed a form. The essay is a work of considerable merit, and will repay a careful perusal.

The author, after sketching the anatomy of the ovaries and their physiology, refers with terse completeness to their functional diseases, giving most useful hints as to the pathology, diagnosis, and treatment of ovarian dysmenorrhea and ovaritis: then, after mentioning hypertrophy of the ovaries and ovarian neuralgia, he passes on to the consideration of ovarian tumours proper, and their treatment.

The author carefully insists on the method of exclusion in the diagnosis of ovarian tumours, separating subjective symptoms from objective signs. Among the latter we cannot quite endorse his statement that "an ovarian tumour will be found to be almost invariably behind the uterus," as we have seen several in front of the uterus, and occasionally pressing it downwards into a retroflexed position. We agree with him in the almost impossibility to diagnose adhesions. His description of ovariectomy is remarkably minute, and his after-treatment sound and careful. The various unfavourable *sequelæ* are discussed seriatim, and their treatment pointed out, reference being made to those cases, not unfrequent, where malignancy is synchronous with or subsequent to the development of the ovarian tumour.

Lastly, the pathology of ovarian tumours is treated of with wide reference to the literature of the subject, illustrated by microscopy.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, December 4th, 1874.

E. J. TILT, M.D., *President, in the Chair.*

C. R. BROWNE, M.D., and WILLIAM REES, L.S.A., were elected Fellows of the Society.

Antique Group, representing the Circumstantialists of Labour in very early times.

Mr. S. H. BIBBY exhibited a cast, taken from the original, found at Golgas in Cyprus, in a temple erected in honour of Bael, the supreme

divinity of generative power, and Ashtareth, that of productive power. The group consisted of four figures, the mother reclining on the couch, an attendant at her head, and the nurse sitting at the foot of the bed with the new-born infant in her lap. It was probably made 300 years before the Christian era.

Old Books.

Dr. TILT exhibited some, lent by Mr. Donald Napier. An "Old Bible," in which the process of confinement was portrayed. "Child-birth, or the Happy Delivery of Women." A translation of Mauriceau's work on the Diseases of Women with Child. "The Expert Midwife."

Dr. AVELING remarked that the seventeenth century works on midwifery exhibited were exceedingly interesting but not very rare. He would like to take the opportunity of asking the Fellows and the Profession in general, whether any one was aware of the existence in this country of either of the three following works:—1, The first edition of Rhodion's "De Partu Hominis," published in 1532; 2, the first translation of Rhodion's work into English, by Richard Jonas, published in 1540; and 3, "Speculum Matricis" of James Wolveridge, published in 1655.

Portrait of Paul Chamberlen.

Dr. TILT exhibited a plate, presented by Dr. Taylor of Birmingham, considered to be a faithful likeness.

Dr. WILTSHIRE stated that the Royal Medico-Chirurgical Society possessed the original set of forceps belonging to Chamberlen, and had kindly lent them for the inspection of the Fellows this evening.

Dr. AVELING stated his belief that the portrait was that of Peter Chamberlen, the inventor of the forceps, and not of Paul, who was the second son of Peter.

Case of Hydrocephalus.

Dr. GRIGG exhibited a specimen of a hydrocephalic child. It lived to the fourth day; cried, took nourishment, and moved all its limbs with perfect ease. The tumour forms as it were a second head at the upper part of the skull, and consists of a bag formed of the expanded brain, the membranes, and the scalp.

Pessary.

Dr. GRIGG also exhibited a modification of Albert Smith's (of New York) pessary, the shaft being made extremely narrow, in order not to dilate the lower half of the vagina, or weaken the main support of the uterus thereby. He (Dr. Grigg) had tried it successfully in cases of retroflexion.

Uterus Dilator.

Dr. GRIGG also brought forward a modification of Ellinger's rapid dilator. The blades are made extremely thin, so as to act like a

wedge ; their length is limited to $1\frac{3}{4}$ inches ; an index in the handles enables the operator to know how wide the blades are expanded. He (Dr. Grigg) had employed it in cases of ante flexion with dysmenorrhea successfully.

Fibroid Uterus.

Dr. MURRAY exhibited a specimen, showing the three forms of the diseases—sub-peritoneal, interstitial, and sub-mucous. The case was seen too late to allow of dilatation, and possibly the removal of the pedunculated intra-uterine fibroid body. The practical and interesting points which arose were, whether hemorrhages would have been less after the growth had been removed, notwithstanding the much enlarged and fibrous state of the whole uterus. Dr. Murray was inclined to believe that little or no good in this case would have resulted from any surgical interference. The condition had existed for at least five or six years.

Dr. TILT inquired if the loss of blood had been very great.

Dr. MURRAY replied that it was a continuous slight drain, not in a stream ; there were clots, which were moulded in the uterus occasionally.

Dr. HEYWOOD SMITH inquired how long the hemorrhage had existed, and for what symptoms Dr. Murray had been consulted. If hemorrhage had continued for five years he thought something might have been done to check it.

Dr. BARNES thought that probably five years ago the growth was intra-uterine, not polypoid. This condition had increased of late. It was well to remove such growths, as thereby the afflux of blood was diminished. The sub-mucous ones caused most hemorrhage, the other one might have passed into an inactive or passive state.

Membranous Dysmenorrhea.

Dr. GEORGE HOGGAN read a paper on the nature, cause, and treatment of membranous dysmenorrhea, illustrated by diagrams and microscopic specimens. The specimen was formed of two different structures, continuous with each other, one from the vagina, consisting of the well-known pavement cells of the part ; the other from the uterus, and formed of embryonic tissue in its early stage, and identical with the structure of the decidua. This rare specimen explained the diverse views on the subject : one school holding that it was an exfoliation, and the other that it was an exudation, the fact being that different observers had examined different ends, and therefore structures, of the same membrane. From the symptoms of the case the membrane seemed due to inflammation. To the naked eye, and under the microscope, the vaginal portion resembled such products of inflammation as the skin of a blister, or the membranous cast of the urethra thrown off in urethritis ; the conclusion, therefore, was that the uterine portion, continuous and contemporaneous with it, was also due to inflammation ; but, *vice versâ*, the uterine portion, which was identical with the decidua, was probably due to the same cause,

i.e., excessive vital stimulation, and the vaginal portion continuous with it likewise. It was therefore reasoned that inflammation and excessive vital stimulation were the same thing, the latter expression being now offered as a new and correct definition of inflammation. The rational treatment he had employed with success, was to lower generative action by anaphrodisiacs, as the bromide of potassium in large doses prior to the commencement of the period.

Report of Sub-committee on Dr. Meadows' Specimen of Dysmenorrhea Membrane.

After giving a minute description of the microscopic and naked eye appearance of the specimen, Drs. Aveling and John Williams concluded that it was the superficial layer of the mucous membrane of the upper portion of the uterus; but of the condition, general or local, which led to its detachment as a whole they were unable to find any anatomical indication.

Dr. JOHN WILLIAMS, in reference to Dr. Hoggan's statements, said he was surprised to find the existence of the mucous membrane of the uterus called in question. The labours of some of the most eminent histologists who have lived during the last fifty years, in connexion with this subject, have supplied the evidence referred to. One of the microscopical specimens exhibited by Dr. Hoggan, at the last meeting of the Society, was a section of the decidua vera. It had a structure similar to that of a mucous membrane of the uterus shortly before a menstrual period. It is not uncommon to meet with small masses of jelly-like substance in the menstrual fluid in persons who suffer from dysmenorrhea. They can be hardened in alcohol, and sections can be made of them, and these sections present a structure similar to that presented by the specimen exhibited to-night—*viz.*, some round and fusiform cells scattered here and there irregularly in patches in a transparent substance; occasionally a columnar epithelium cell is met with, but more commonly round and fusiform cells. A similar arrangement is frequently met with in mucus passed from the bladder.

Report on Dr. Carter's Specimen.

By Drs. ROUTH and BRODIE.

The weight could not be determined, as the lungs had been removed, which also precluded the hydrostatic test. Its length was twelve inches, the left testis was within the abdominal cavity, the right could not be found. The eyelids were adherent and the membrana pupillaris present. The nails had not reached the extremity of the fingers. The hairs were dark and fully formed. No *valvula conniventes* were found, nor were there any convolutions of the brain. These signs would rather fix the age at about six months. On the other hand, the well-marked fibrous condition of skin, the existence of meconium in the colon in abundance, and the advanced state of ossification of the skeleton, especially in the head, would rather point to a later period of life.

Adjourned Discussion on Dr. Gervis's Paper on Retroversion of the Gravid Uterus.

A short abstract was read referring to the principal points. As regarded the induction of abortion, Dr. Gervis objected to it until all other measures had failed. As to the time for attempting the reposition, he was in favour of resorting to it as soon as the bladder had been emptied, delay endangering various pathological possibilities. As to the best position, he thought the knee-shoulder one possessed no advantages over that on the side, the main point being to press the fundus upwards and to the side of the sacral promontory. As to the exact manipulation, he preferred fundal pressure alone, either per vaginam or rectum, a finger being hooked in the os if absolutely necessary. The use of anesthetics he thought unnecessary as a general rule. As to the cause of death, he thought the gangrenous condition of the bladder and its accompanying constitutional distress in most cases an adequate explanation. An extract from a letter to Dr. Barnes, by Max F. Simon of Lucca, Jamaica, narrating the particulars of a case, was read, in which great distension of the perineum, with extension of the posterior vaginal wall and anterior wall of the rectum was very noticeable.

Dr. BARNES adverted to the importance of collecting into one focus as many cases as possible. The addition of Mr. Max Simon's interesting case would make five cases in one volume of the "Obstetrical Transactions." Mr. Max Simon's case illustrated a very important point in diagnosis. The bulging of the perineum by the uterine mass, increased under bearing down efforts, was characteristic, and did not exist in retro-uterine hematocoele, the condition which in Dr. Barnes's experience had been most frequently mistaken for retroversion of the gravid uterus. This symptom was not formally indicated in books, but he found it was mentioned in the histories of several cases. Under the reflex expulsive efforts set up by the pressure of the uterus low in the pelvis, the retroversion, or rather the overturning of the uterus was increased. The uterus was now like the fetal head in labour, its body rolled down in the line of Carus's curve, whilst its neck was more or less fixed at the symphysis pubis. Dr. Barnes then referred to the condition of the bladder. Dribbling, he submitted, was an unnatural state; it indicated retention, and therefore should be taken as an imperative indication to pass the catheter, whereas practically it often threw the surgeon off his guard and led to neglect of this course. It was in the obstruction to the bladder that the chief source of danger to life existed; and here he would ask if Dr. Gervis or any other Fellow could point to a single case of rupture of the bladder. This was often assigned as a cause of death, but he doubted if it ever happened. Long before this could take place death would ensue from damage to the urinary organs, the gangrene of the mucous membrane of the bladder, the retrograde damage to the kidneys, urinemia, shock, and exhaustion. These compensating factors were at work to obviate rupture of the bladder;

the dribbling or overflow, the stretching of the bladder, and absorption of part of the urine. Peritonitis, also commonly assigned as a consequence of retroversion, was in fact very rare. In four fatal cases at least which he had investigated there was no peritonitis. With regard to treatment, he insisted that where there had been considerable bladder damage, as proved by the mucous, purulent, and sanguineous urine and constitutional disturbance, attempts at reposition should not be persevered in. If the uterus remained locked, exerting undue eccentric pressure upon surrounding organs, it would be better to diminish its bulk and provoke abortion by puncturing the uterus and drawing off the liquor amnii by the aspirator trocar. In a considerable number of cases reposition was easy, and it should be effected; but he had seen death ensue, although reposition had been accomplished without difficulty. The shock and urinemia had already done their work. He had seen with Dr. Brunton a case of retroversion or pelvic gestation at term similar to the one brought before the Society at one of its earliest meetings. In that case the os uteri could not be found until the patient was put under chloroform. He had delivered by pulling down the cervix, and at the same time pushing up the uterus with its contents from the pelvis. Thus rectified the child was delivered. There was intense albuminuria caused, as Dr. Brunton thought, by the pressure upon the pelvic and abdominal vessels. The patient recovered.

Dr. CLEVELAND said the question in his mind was not whether the means employed for the reposition of the uterus were of the most skilful and gentle kind, for on that point he had no doubt, but whether they were used at the proper time. He was at a loss to conceive how a patient from whose bladder such a large quantity of bloody ammoniacal urine was evacuated, could be in a fit condition, immediately afterwards, for an operation that could not fail to be attended with considerable shock. He believed that in such cases it would be better to direct our remedial measures in the first instance to the bladder, which was the true source of danger, by catheterism, and perhaps suitable injections into its cavity, but above all by such constitutional treatment as would enable the patient by-and-by, if the uterus did not right itself, naturally to undergo with a better chance of success the necessary measures for reduction. He further wished to ask if such extreme cases ought to occur at the present day, and to express a hope that through this discussion attention might be drawn to the risk incurred by neglecting retention of urine in the early months of pregnancy.

Dr. GEORGE ROPER thought the diagnosis of retroversion of the gravid uterus was generally not difficult. Retention of urine was commonly one of its first signs. Stretching of the anterior wall of the vagina and consequent drawing up of the urethra, concealment of its orifice high up behind the symphysis pubis, rendering catheterism difficult, were strong indications of its existence. Retention of urine commonly commenced during the third month of pregnancy, because

at this period the length of the uterus equalled the antero-posterior diameter of the pelvic cavity ; that in a certain class of cases retention of urine did not occur at such an early period, viz., when the uterus was turned topsy-turvy. Here the long axis of the uterus corresponds to the axis of the pelvic brim, and the uterus continues to grow in its reversed polar position till a later period of pregnancy. The cervix here pointing upwards grows in an upward direction into the abdominal cavity without exerting injuriously any longitudinal pressure. A case of this kind in the sixth month of pregnancy had been observed, in which the uterus, apparently by its own contraction to expel its contents, underwent self-rectification, casting out the ovum with membranes entire.

Dr. BRUNTON said that as Dr. Barnes thought it of so great importance to note every sign and symptom present, he would remind Dr. Barnes that in the case alluded to there was an oblique furrow on the abdominal surface, giving one the impression of the existence of twins. The furrow no doubt was caused by the doubling over of the uterus.

Dr. WYNN WILLIAMS drew attention to the liability to a recurrence of retroversion in subsequent pregnancies. In one case abortion at the third month had taken place on two occasions, the uterus was replaced and a Hodge inserted, the patient becoming pregnant, and went her full time, the Hodge being left in until she had quickened. Again she became pregnant ; nothing was done, and she aborted. She again became pregnant and went her full time, the uterus having been replaced and a Hodge inserted about the third month. In another instance a patient had been allowed to remain three days without the bladder being relieved. She was between four and five months pregnant. The bladder was enormously distended with urine. Two large-sized chamber utensils of urine were drawn off. In a day or two the whole of the mucous membrane of the bladder was passed in a gangrenous condition, and the patient died of blood-poisoning, not uremic, but septic. Another patient consulted him when seven months pregnant for the purpose of having premature labour induced, stating that she had on all previous occasions aborted or had a premature labour. The urine was drawn off for several days, and twenty to thirty drops of *liquor ergotæ* given thrice daily, in the hope that the contraction of the muscular fibres of the uterus might assist in righting its position. Before the end of the week the uterus acquired its natural position, and the patient went her full time. Whether the administration of the ergot or the drawing off of the urine was the cause of the replacement it is not easy to determine.

Dr. AVELING observed that the weight of the gravid uterus was sufficient to render the influence of gravitation worthy of consideration. He would therefore take exception to the lateral recumbent posture as the best. The knee-elbow position he believed would be found in all cases to favour the removal of the fundus uteri from the pelvic into the abdominal cavity.

Dr. GALABIN called attention to a mode of treatment from which he had found benefit in one instance, viz., gradual pressure by an air-ball pessary in the rectum, introduced for a few hours at a time. Previous attempts at reduction both in the knee-elbow and lateral position had been made under chloroform, and had failed; the use of air-ball pessaries in the vagina had only slightly raised the fundus, and there was reason to believe that the uterus was fixed by adhesions. Treatment was interrupted before the uterus had been completely restored, but the difficulty of micturition was entirely relieved. His own experience was limited to six cases of complete retroversion of the gravid uterus, all at or about the fourth month of pregnancy. Of these three were restored at once by the fingers in the rectum, counter-pressure being applied not to the os or cervix by the vagina, but by the hand externally above the pubis. In one of them a previous attempt in the lateral position under chloroform had failed, and he was led to believe that the knee-elbow position presented greater advantages. In another case the uterus was replaced at the end of three days by the use of an air-ball pessary in the vagina, after an attempt at immediate reduction had failed. In the sixth, complete restoration was procured by means of a copious enema, which had been given as a preliminary to further treatment. In none of the cases did abortion occur.

Dr. T. BRAXTON HICKS said that as the time was short he would give the results of his experience in a very few words. He had never seen any one die from retroversion of the pregnant uterus excepting one patient, who had advanced so far as the seventh month and a half. In this case there had been old adhesions binding down the uterus, together with chronic and recent peritonitis. There had been no bladder trouble. Dr. Hicks was present at the delivery of Dr. Oldhams, which was at full term, and he believed there had been no retention. With regard to the means he had taken to restore the uterus, he had never had any real difficulty, although he knew such cases did sometimes occur. He always had the urine drawn off two or three days, giving opiates to lessen irritability, and then placing the patient in the knee and elbow position, he gently pushed up the fundus. If the opposite pole, being above the brim, did not come down, he pressed it down from the exterior just above the symphysis pubis. If these measures, carried out gently and slowly, failed, he placed the patient on the side and introduced an empty air-bag into the vagina, and then inflated it. A T-bandage with perineal pad was applied externally to retain it, and generally about the second, not later than the third day, he had found the uterus restored. He had never found occasion to apply the fingers or bags per rectum.

Dr. PALFREY remarked that on hearing Dr. Gervis's paper he thought they were three very unfortunate cases. In the London Hospital he had had several cases, but death was a very rare sequence—two only out of twenty-seven cases. The last case he had seen occurred in Essex; six medical men had attempted to pass a

catheter and failed. He had succeeded with the greatest ease in passing one with an olive-shaped end (if necessary a larger-sized one could be passed over this), where the finger had failed to detect the urethra after nearly two hours' trial.

Dr. GODSON called attention to the effect produced upon the kidneys in cases of retroversion of the gravid uterus, an increased secretion occurring for days after the first evacuation of the bladder. This rendered it important that the catheter should be passed very frequently in order to avoid distension of the bladder. In one case he remembered 200 ounces were first drawn off; next day, 102; the following, 104; diminishing to an average of 48 ounces directly the position of the uterus was restored. The exfoliation of the mucous membrane of the bladder did not necessarily cause death, there being a specimen in the museum of St. Bartholomew's Hospital of the whole of the mucous membrane of the bladder, with abundance of muscular fibre at the back, which was passed per urethram by a patient where the uterus subsequently righted itself, and delivery took place at full term, the patient being still alive, but unable to retain her urine more than a few minutes, a contracted bladder evidently existing.

Dr. EDIS had met with several cases. In one the patient had been allowed to go nearly three days without any relief to the bladder; the fact of pregnancy had been overlooked. Nearly ten pints of urine were drawn off by the catheter, the patient placed in the knee-shoulder position, and the retroverted uterus replaced by pressure through the rectum. In another instance miscarriage at about the fourth month had twice taken place, and was only averted a third time by restoring the uterus to its proper position and inserting a Hodge, the patient going her full time. He thought the knee-shoulder position by far the best, care being taken to press the fundus to either side, and not against the promontory of the sacrum. He had never had to resort to anesthesia in these cases.

Dr. JOHN WILLIAMS thought that ergot relieved the retroverted condition, and was of much service in these cases.

Dr. HAYES doubted the occurrence of sudden retroversion of the gravid uterus. The urgent symptoms, retention of urine, great abdominal pain, tenesmus, &c., supervened suddenly, but this was the case almost invariably where no thought of a sudden retroversion was entertained; hence the supposition, now given up by most authorities, that distension was the cause of, and not caused by, the retroversion of the uterus. The distended bladder, however, interfered greatly with, and often quite prevented the uterus regaining its normal position, which, unless bound down by adhesions, it had always a tendency to do. This was clearly seen to be so by numerous cases where, simply by rest and the constant evacuation of the bladder, maybe with the aid of an air pessary in the vagina or rectum, the uterus righted itself. Why not imitate this plan in such urgent cases as some of those recorded by Dr. Gervis and other Fellows, in which grave injury to the bladder or kidneys, or to

both, was so evident? Do not proceed in these cases to hasty and forced reposition, which has resulted so often in fatal shocks, but enjoin rest, keep the bladder empty by catheter, and give the uterus time to gain its normal position. This would be greatly helped by placing in the rectum, or better in the vagina, an air pessary which would start the upward movement of the uterus.

Dr. GERVIS, in reply, said he had not observed that bulging of the perineum by the fundus of the retroverted uterus to which Dr. Barnes referred; at all events when retroversion occurred in the early months of pregnancy. In none of the three cases narrated had he noticed this appearance. In one the vulva was edematous. He was scarcely disposed to think it occurred with sufficient uniformity to be considered diagnostic. The question of the propriety of restoring the uterus to its proper position when the bladder was seriously implicated, as alluded to by Dr. Cleveland and Dr. Hayes, was of course one of the greatest importance. He could only say that in the cases narrated there was no great difficulty in effecting the reposition, and that certain leading principles of treatment being agreed upon, details might be influenced by the circumstances of each case. He still was inclined to think that no great gain, if any, arose from the knee-elbow position. If one pictured to oneself the situation of the retroverted uterus when a woman was in the knee-elbow position, its axis would be still rather upwards and backwards, and it must be the pressure of the fingers, and not gravity, which accomplished its reposition. On the question of the early replacement of the uterus, he still thought that this should be accomplished as soon as its displacement was discovered; it was then comparatively easy. And even if the bladder could be saved from injury by daily drawing off the water, there was still the pressure upon the rectum to be considered, and the possibility of the occurrence of peritonitis, as in the case narrated by Dr. Hicks. He begged to thank the Society for their kind attention to his paper, which was intended more to elicit opinion than to bolster up any particular theory.

On the Indications afforded by the Sphygmograph in the Puerperal State.

Mr. FANCOURT BARNES read a paper on this subject. He pointed out the extreme high tension in *primiparæ* before labour; its disappearance after delivery; the appearance of a characteristic tracing on the second or third day, with the milk fever, showing fulness, some diastole, an absence of tension, a frequency of about 120 beats per minute, and a well-developed percussion stroke. He showed the gradual return of the pulse from this date to its normal state. He considered the high tension in pregnant women due to—1st, hypertrophy of the heart; 2nd, increased amount of blood; 3rd, additional strain on the kidneys caused by the added effete matter thereby to be excreted; 4th, the vascular system not having accommodated itself to the added physiological work; 5th, functional increase of nerve force during pregnancy. He said that if the high tension made its

reappearance after delivery it might be looked on as an omen of coming albuminuria with eclampsia and uremia. Here he considered the sphygmograph to afford aid in the prophylactic treatment of these diseases.

Dr. Wharton, Dr. Hood, and Dr. Hope were nominated auditors.

OBSTETRICAL SOCIETY OF DUBLIN.

Meeting, November 21st, 1874.

EVORY KENNEDY, M.D., *President, in the Chair.*

THE PRESIDENT'S INAUGURAL ADDRESS.

Taken in its most comprehensive sense, the duty of the physician is to deal with the abnormal functions and structures of the human body and mind. In order to discharge this duty he must know, accurately, what these vital functions are in the normal state—upon what their normal actions depend—what the structures are that perform these functions—what variations in functions constitute disease, and how far these variations are due to structural alterations—how far to other causes.

Medicine is a science of observation ; consequently, its professors (deprived of those advantages possessed by professors of the exact sciences) have ever laboured under great difficulties in its investigation. Man we accept as the highest and most perfect type of creature known to us—a machine constructed with the most consummate skill—with mechanical adaptations the most complete—with organs the most complex, capable of executing the most heterogeneous and most harmonious duties—with laboratories combining within them synthetic and analytic powers that tax the skill of the most expert chemist to imitate. Superadded to all these perfections, this wonderful specimen of mechanism is endowed with powers of motion, sensation, perception, reason, free-will, and reproduction, the existence and continuance of which are secured by a motive force known as life—a power or property which has hitherto baffled alike conception, description, and definition.

The difficulties investing this great mystery should not cause us to despond, or relax in our efforts to elucidate those laws upon the study of which so much of the weal of mankind and of our own usefulness, as professors of the noble art, depends. A conviction of the importance, to us, of emerging from the dense atmosphere of thought that too commonly engrosses and stifles the physician in the details of practice, induces me, in addressing you on this occasion, to soar, for a moment, into the lighter atmosphere of biology, in its application to disease—an inquiry which involves the necessity of dealing with our *raison d'être*. Much attention has lately been roused towards biology by the lectures delivered at the Belfast meeting of the British Association.

There can be no doubt that we owe to the Darwinian school

of philosophy a deep debt of gratitude for the light thrown upon biological science, more especially in the confirmation of the laws known as those of evolution and selection.

We freely admit that man, as inferentially proved by Professor Huxley, is an automaton. But let us examine and consider the construction of the most perfect and ingenious adaptation of mechanism art can produce—say the automaton chess-player, or Babbage's calculating machine—and ask ourselves whether it is probable, or even possible, for the human mind to conceive that—by any fortuitous concurrence of atoms, any powers of attraction, any evolution, any selection—such an instrument could be constructed, and so constructed that an additional faculty or power could be imparted to it of reproducing itself, not as originally formed by any of the laws referred to, but by an entirely new process, that of throwing off from itself an instrument like itself, complete in all its structures and functions like its parent?

Up to the present moment we must admit that no aggregation, no union or reunion of fortuitous atoms, no symmetrical crystalline increment, no vegetative force, as insisted upon by Needham, no *corruptio unius generatio alterius* doctrine, has succeeded in explaining the production of a living creature. These, and a host of such like theories, have, at various times, occupied the attention of thinkers; and successive schools of thought have grasped at one or other of the laws of matter to explain and elucidate vital phenomena. Thus, attraction, mechanics, hydraulics, chemistry, motion, change, and even, as a *dernier ressort*, the term *mutatis mutandis*, have been pressed into the service. True it is that every one of these laws, and many more observed in momentary operation in the mineral kingdom, are freely applied in the animal; but these are merely the properties, functions, or effects observed in operation in vital structures, and help us to trace the links of the chain, but the causation is the point of suspension beyond our reach.

Bichat pointedly illustrated the extent to which the laws of physics had been carried in explanation of vital phenomena, by observing—“If physiology had been cultivated by men before physics, as the latter has been before the former, I am persuaded that they would have made numerous applications of the first to the second. They would have seen rivers flowing by the tonic action of their shores, crystals reuniting themselves by the excitement which they exercise upon their reciprocal sensibility, and plants moving because they reciprocally irritate each other at great distances.” And it is impossible to express our knowledge on this subject in better language than that used by Tyndall,* in treating of Spencer's views, as follows:—“In fact the whole process of evolution is the manifestation of a power absolutely inscrutable to the intellect of man. As little in our day as in the days of Job can man, by searching, find this power out. Considered fundamentally, then, it is by the operation of an insoluble

* Address delivered to the British Association, as President, at Belfast, 1874.

mystery that life on earth is evolved, species differentiated, and mind unfolded from their prepotent elements, in the past." The President of the British Association subjoins the following brief comment:—"There is, you will observe, no very rank materialism here."

It is to be deplored that men devoted to the exploration of science, in its more obscure walks especially, should have their equanimity disturbed, and their imaginations trammelled, by a consideration of the possible influences the elucidation of truth may exercise upon particular schools of religious thought. God is a God of all truth, and shrinks from no exposition of His own works—let man reconcile them as he may to his narrow or broad reading of Revelation.

In our own times a vast change has come over the minds of the soundest theologians, of all persuasions, on this subject; and, as we see most notably in the science of geology, the ablest divines are those who hail its discoveries with a full confidence that as the light of true science could not possibly throw an obscurity on the light of true Revelation, so the former, when properly understood, ought not to be measured by the depth of shade attempted to be thrown upon it by the haze of ignorance. Let the conclusions of science, arrived at by whom they may, be accepted as truths if true, and rejected unsparringly if false.

The propounder is no part of the discovery, neither is his sect nor creed. If an enemy to our faith it is who has done it, his testimony is the more valuable, since every additional truth elucidated must redound more to the glory of the God of truth. We shall see before concluding that philosophers, in dealing with asserted facts in science, whether recently insisted upon or received as such for ages, evince no hesitation in rejecting them when proved untenable or fallacious.

All we ask is that the objectors to discovery on religious grounds—or, rather, on their interpretation of Revelation—should try scientific questions by the same crucial tests that natural and moral laws justify; and when they feel tempted to put Revelation against progressive discoveries, before bringing the ark of God into the battle, they should satisfy themselves upon the truth or falsity, *per se*, of the matter in question. Gamaliel's reasoning is quite as applicable to philosophy as to Revelation:—"And now I say unto you, refrain from these men, and let them alone; for if this counsel or this work be of men, it will come to nought; but if it be of God, ye cannot overthrow it, lest haply ye be found even to fight against God."

On the other hand, scientific men should not be induced to tread rashly upon sacred ground, or provoke, by their language, attacks upon the sciences to which they are devoted—thus raising a new issue of their own seeking, directed into channels in which they may find themselves out of their depth, and risking for a time even the loss of the truths contended for, since society not unfrequently, however unfairly, identifies a discovery with its advocate. The Scriptures were never intended to anticipate or supersede the discoveries of natural science, and least of all are scientific reasoners excusable in raising such an

issue. The soundest thinkers have ever proceeded in this spirit. Thus Newton, Spallanzani, Bacon, Berkeley, Herschel, Hamilton, Whately, Faraday, Romney, Robinson, Kingsley, and Haughton have pursued this twofold path of investigation with fearlessness and faith.

It is not for us to interpose barriers to human investigation upon the ground of man's limited capacity. True it is that human vision does not extend far enough into space to see a tithe of the worlds that occupy it, neither can it decipher the structural page impressed upon the monad or atom placed within a few inches of the eye without the aid of human inventions. This teaches us two lessons—one, of a true humility in acknowledging that our unaided bodily powers are limited by our structure; the other, a true self-respect, since we are made in God's own image, *quoad* our reason and moral nature, in the exercise of which (at least in the natural world) He placed no limits.

These considerations should encourage us to free investigation in nature and science, as the obvious duty of man. The greater the grasp, the more comprehensive the acquirements, the larger the capacity of the creature, the more evident the omnipotence of the Creator. Man can make a watch—it requires God to make a man. Let us, then, accept the conclusion of the philosopher as an additional testimony that animals and men are automata, and let us persist in our endeavours to elucidate the study of nature in all its structures, phases, and functions, nor presume to close up against each other or ourselves any avenue, however winding, any channel, however difficult, any haven, however remote, that may open up to our ken knowledge—obscure, elevated, or inaccessible as it may appear to us at this moment.

In my Inaugural Address of last year I ventured to call the attention of this Society to the influence exercised by the laws of evolution, and what Mr. Darwin defines as that of “natural selection,” in resisting the decadence of the vital powers, and pointed out its influence in relation to disease—more especially to scrofula. We shall, with your permission, before taking this investigation up at the point we reached on that occasion, accept as admitted “that the activity or vitality of each animal, and especially of man, is as a whole proved to be as the transferred activity of his molecular structure,” and add that this applies to the earliest period of what I venture to term his growth; for I maintain Topsy was a philosopher when she said—“I ’spex I grow’d.” But man is originally, when first sensible to our sight with the aid of the microscope, a minute portion of cellular tissue—in fact, a plastic germ—which evolves or develops by an inherent incremental force, assisted by the absorption into its substance of a nutritious pabulum supplied by the matrix. If we trace the germ further back to a period before its individual development, we find it, as you perceive it here, a very minute portion of granular membranous structure. The germ of this germ was traceable in the

infant at birth—nay, in the fetus. A similar germ existed in its parent—and, no doubt, in the human stock throughout all time.

I shall not delay you by dwelling upon the distinction between epigenesis and evolution.

Many theories started up at intervals from the time of the Greek philosophers, but especially of Lucippus and Empedocles, who ascribed the phenomena to the reunion and separation of fortuitous atoms, until the period of Harvey's masterly elucidation of oviparous generation.

Without being deterred by what we may term the puerile mechanical difficulties of "emboîtement," or impossibility of the germs of the incalculable myriads of germs resting within germs, like a nest of pill-boxes, throughout all time, let us accept the general fact. The ovarium selects, assimilates, and converts into its own growth-tissues those portions of the blood flowing to it exactly in the same manner as do the glandular and secreting organs of all the other animal tissues.

There is therefore nothing in the slightest degree different or more difficult to comprehend or accept in this than in the liver secreting the bile, or in the mesenteric or thymus glands supplying the waste of their own tissue. Indeed, in point of comparison, the wonder would appear greater that the digestive organs should possess the power of selecting chyme from the crude variety of edibles conglomerated in an alderman's stomach at a Lord Mayor's feast (a *mêlée* that might puzzle even a Papin's digester to dissolve), than that the organ in question should possess the power ascribed to it.

Philosophers have, in my mind, ever dealt with the question of primary or individual vitality on an erroneous principle. They have treated it as if there was a moment or definite time at which it was incipient; whereas true philosophy would expunge the term generation, and even regeneration, as physically applied, from our dictionary. The first reproductive creature was constructed, as we see in the ear of corn, with the germ of a future growth forming a portion of its primitive entity. No new creation or generation was required to cause the ear of corn to grow and reproduce itself; it was only necessary to stimulate it and place it in such a relation with external influences, as to secure its power of assimilating into its structures the pabulum necessary for its development and growth; and so enduring, so pertinacious, so patient (if we may be permitted to apply a moral epithet to its qualities) is this grain—when placed under circumstances favourable to its preservation, "*moins*" its *growth* and development—that, as we see in the mummy wheat, it has, after fifteen hundred years, retained its vitality and power of *growth*—sprung up into vigorous development, and perpetuated its offspring to an unlimited extent.

Exactly the same vitality, the same perpetuated organization, exists, "after its kind," in the animal and in man. True oviparous reproduction or descent gives us, on a limited scale, the same train of

phenomena. The egg of the fowl, after its stimulation, is separated; placed apart; an interval of days and weeks, under favourable circumstances, elapses; the further stimulus of heat is applied and sustained; incubation is completed, and the creature chips its shell, walks about, and eats. At no moment could life be said to commence in the egg; it was there, and, so to speak, had been there from the moment the first parent fowls were created! Where, then, is spontaneous generation? the inflated raving of the doctrinaires. God, in his wisdom, created man, "male and female created He them." He it was who uttered the dictum, "*Be fruitful*, and multiply and replenish the earth"—the very language of the Creator, explaining that man was to continue his species by a *fruitful growth*—exactly the language used in His dictum to the vegetable kingdom.

Let us now turn to the practical application of these views, in doing which you will, I trust, excuse my briefly recapitulating the observations I made from the chair last year upon scrofula.

Scrofula.—The strumous habit, whether hereditary or incurred by imperfect nutrition and other depraving influences, is characterized by general and local symptoms. Its occurrence in the lower classes and animals is sufficiently explained by want, exposure, and unhealthy atmosphere—especially crowding. In the upper classes its hereditary types are also frequently met with, whilst it is an induced or sporadic disease in them; and although, as in the poorer classes, it may be traced to imperfect nutrition, the inanition depends often upon a cause directly the reverse—namely, upon an excess or inappropriate supply of food of a too stimulating quality, starving them in the midst of plenty by thus overloading and over-stimulating the digestive organs, over-taxing their powers, and inducing such derangement as unfits them for the healthy exercise of their functions. This causes a failure in the assimilating powers as injurious to healthy growth and development as occurs when food of a wholesome and natural quantity and character is withheld.

The great mortality of children from this disease proves it to be one of growth or development. But although a large proportion of those who have (from whatever cause) incurred the specific habit known as the strumous, survive childhood, they carry with them through life a latent enemy, a pervading evil influence, permeating every tissue in their body, which watches to take them at a disadvantage the moment the circumstances or condition of the possessed individual afford an opportunity.

To us in our more favoured country the varied phases of strumous diathesis offer themselves in sporadic or, at most, family groups. It is not so in other countries. In Switzerland, Prussia, Germany, Poland, and elsewhere, it is a constantly existing endemic disease, perpetuated by local atmospheres, *non-naturals*, and other external influences, as well as by hereditary taint, in whole districts of country, and numbering its victims by millions. When we consider that all this misery is *preventable*, if not curable, that proper laws of hygiene,

if carried out, might, in the course of two or, at most, three generations, put an end to it, and prevent this bestial deterioration of millions of our fellow creatures, we may well exclaim, in the language of the prophets, "How long?"

In tracing the strumous habit to defective nutrition, it would be wrong to omit the influence, in its hereditary development, produced by the practice of confining the reproduction to the same stock. This is a practice that breeders in domestic animals always avoid, and the ill effects of which (notwithstanding the denial of Erichsen and others) most gynecologists are familiar with. Now, without going with Darwin so far as to attempt to explain the process of evolution by purely physical causation, independent of the existence of a guiding intelligence, I am quite satisfied that it is within the capacity, and consonant with the design of the creation, that all organisms, as Darwin asserts, should be variable. The views of Professor Cope and Murphy appear to support this idea, and Agassiz' opinions on the early development of character in the species strengthen it. But this variability is a part of that original design stamped upon them. Now let us carry that idea a little further, and accept these variations, not merely as accidental occurrences taking place—as Mivart, supported by Professor Murphy in his rough calculation, suggests—at intervals, varying from thousands to millions of years, but as constant in their occurrence and as necessary to secure organic progression—let us accept it as a general law, applicable to the highest as well as the lowest grades, operating in the most perfectly developed specimen of the creation, man, as in the primary protoplasm of the lowest organized entity in the creation, *that all organizations are not merely variable but varying*—let us further admit that this law is established not merely for the purposes of evolution, *but for the sustentation in their healthy and normal state of the endowments, capacities, and organizations of the genus*, as well as for their highest development and conditions in the species, with this qualification we may admit selection as part of our belief in the laws of nature, without infringing upon either the dicta of Paley or the creative jurisdiction and design of the Deity.

In the vegetable kingdom the law of selection is as remarkable as in the animal kingdom. Witness the pains taken and the designs planned for affording opportunities for stimulating, as it is termed, the plant into a healthy vigour and variety, in its reproductive growth, by the application of pollen from a new stock.

The recent discoveries of Professor Burdon Sanderson, respecting the electrical phenomena which accompany the irritation of certain leaves, and similar to those which occur in the animal muscle, throw an additional light upon the analogy existing between the two kingdoms, and render it not unlikely that the contractile or sensitive substance, both in muscle and vegetable tissues, may eventually prove to be protoplasm, the principal difference observed being the time required for the restitution of its irritability after exhaustion—

the period of latent stimulation being only one-hundredth of a second in a muscle, whereas it is one-third in a plant.

There can scarcely be any principle in physiology more satisfactorily established, in my mind, than that of hereditary selection—a principle as conclusively proved by affirmative facts as by negative results.

If the investigation of the natural laws that govern life justify our adoption of the theory of evolution, and if selection or variation to this extent be further admitted, that no two leaves or faces are exactly alike, but varying; that these variations extend throughout all organized structures in their growth and renewal, and are productive of power and vital force in the possessor, and perpetuated by hereditary influence—if we further believe that although wearing out in the individual, as must be the case in any machine with or without vital power, as so well explained and insisted upon by Professor Owen, and that the vigour and vitality of the germ is secured by separation from the parent stock, whilst possessing its vital energy in the highest degree—if, I say, we admit these conclusions as fairly arrived at by observation and reasoning, then I cannot see how we can limit these vital laws to arbitrary periods; we must, on the contrary, grant their ever-presence and constant operation in organic structures.

The negative results, or the effects observable from neglect of attention to hereditary selection, are especially so in scrofula, which we have already traced, when sporadic, to defective nutrition. The instances usually adduced as illustrative of the descent of what is termed a favourable variation to the offspring, are those modifications of structure which enabled the parent to survive in the competition for life. What structural endowment can be more calculated to effect this object than power of selection, so as to secure organic progression, and the consequent development of the *corpus sanum* in its most perfect state in man, the masterpiece of organic creation? If, then, as asserted as well by Darwin as his opponents, there exists a law of variable, or, as I venture to maintain, of a varying organization, essential to organic progression, and if a man has arrived at the highest stage of this progression, it is not straining the proposition to affirm *that the operation of that law continues now, as it has ever done, at least in the sustentation of the progress it has ever attained.* If it ceased to operate, in this respect, as far as the laws implanted in it permit, the natural result to be anticipated would be retrograde action, and the consequent hereditary development of a deteriorated being, when the means of securing progression, *i.e.*, selection, were disregarded.

And this is exactly what occurs in the development of hereditary struma, depending upon the causes alluded to. The manner in which the scrofulous deterioration evinces itself, although most apparent in the nutritive system, is not confined to it, nor are its ravages limited to mere defect of nutrition. Although anemia is its most constant accompaniment, lesions depending upon a want of balance in the

vital orgasms are very common—hence morbid actions and degenerations of various kinds occur.

If this reasoning be admitted to hold in scrofula, as accounting for the degenerations and morbid actions observed to occur in that protean malady, it is not impossible that further light might be thrown on the *causæ morborum* in some other diathetic or constitutional diseases, more especially in those ascribed to habits of body, or blood-poisoning, as gout, between which a remarkable resemblance is observable. It is not merely from the neglect of hereditary selection, but from a hundred and one other causes, many of them occult, and others obvious enough, although disregarded, that the deterioration and decay of the vital powers occur. These considerations would lead us into too wide a field did we merely attempt their enumeration at present.

As the practical scope of our remarks on an occasion of this kind is necessarily limited, let me select a very few instances occurring to my own observation which will help to elucidate our subject, commencing with the functions of the brain.

The observations of Professor Huxley in support of his view that brutes are automata, his and Goltz's vivisections of the frog, and the case of the wounded sergeant, reported by Dr. E. Mesnet, furnish us with remarkable examples of the effects produced by the removal of, and injury inflicted on, the anterior lobes of the brain. In both there was an absence of sensory impressions in certain organs, but it is clear that what was known by bygone physiologists as organic sensibility and organic sensible contractility remained, as well as a perceptible response to certain stimula through the organs of touch and the skin.

We must all be familiar in practice with cases bearing on this question, where the sensorial action is more or less interfered with, in which no direct injury can be traced to the anterior lobes of the brain, but in which this and other portions of the organ are abnormally acted upon, and their functions suspended or impaired by simple reflex actions through the neurotic connexion, or sympathy, as we term it, with remote organs of the body in man and animals.

The following case illustrates this fact:—A boy between eight and ten years of age was three times under my care with confirmed catalepsy of the most obstinate character. I found him on each occasion lying totally insensible with his limbs extended, rigid, fixed, and immovable. No stimulant called forth the slightest sensibility; the only evidence of life a feeble heart's action of about 50 beats in the minute, and an inaudible respiration of 11, which was counted with difficulty by the scarcely appreciable expansion of the chest. On each occasion the attack was due to cecal lodgment of several days' standing before attention was called to him. Fortunately there was sufficient consensual sympathy remaining between the muscles of the pharynx and those of respiration to permit of his swallowing, which process was secured at long intervals by introducing fluid well back

into the pharynx, and stopping the respiration through the nose, by compressing the nostrils, when the act of deglutition was automatically effected through the organic sensibility of the structures in order to permit of inhalation. The quantity of cathartics administered to this patient before overcoming the obstruction is almost incredible. On two occasions it resisted them for five days, and on the third for seven days; but the remarkable fact in this case was the rapidity with which sensation, cerebation, and the power of motion returned after the sympathetic cause was removed, leaving no inconvenience of any kind beyond prostration and debility.

From the period of the author of "Diakosmos" to that of our contemporaries, Herbert and Maxwell, upwards of two thousand years, the attention of philosophers has been drawn to the laws of atomic or molecular structure as the basis of cosmic existence, and the seat of sensation and life. Gassendi, Lucretius, and others more near our own period, may have run riot with the extent to which this principle was carried, and enunciated such "rank materialism" as that "nature is seen to do all things of herself, without the meddling of the gods." Facts based upon the united experience of biologists and physicians, upon aberration in health and disease, on experiments the most crucial, have established the conclusion that what we term sensation and thought have their seats in the nerve tissue, spinal cord, and brain. Indeed, it seems almost a work of supererogation to dwell upon a truism now so universally admitted. I shall briefly mention a case of this, of a kind with which all my hearers are, doubtless, familiar. A patient in previous good health was suddenly attacked with general anasarca and effusion into all the serous cavities. The ventricles of the brain were the last attacked. Previously vivacious, talkative, and intelligent, remora set in; hours passed without her articulating, or she muttered incoherently; was roused to consciousness with difficulty to take her food, and at times lay in a state of stupor; at the same time she took her food well, and all her functions were natural. Remedial agents told well upon her; absorption of the fluid set in; the anasarca and effusion disappeared rapidly; her cerebation became more clear, her incoherence disappeared; the hallucinations recurred at prolonged intervals, although certain traces of imperfect cerebation show themselves at long intervals, and she still appeared, in nautical phraseology, to wear slowly, not answering at once to the helm when suddenly addressed. This defect wore away, and she became as she had been before her illness. Here, then, the sudden effusion of a small quantity of serum into the ventricle of the brain vitiated and ultimately suspended cerebation, and its removal was as immediately followed by return of the power.

A gentleman, who suffered from dyspepsia, was repeatedly attacked, at the conclusion of his dinner, with sudden insensibility, which lasted for about half an hour; from this he rallied more or less tardily, but with his perceptions obtuse—at first incoherent, afterwards wandering, but capable of being roused and of answering questions coherently. A

few days usually found him restored to his former capacity, only his sense of taste as well as of hearing remained impaired; but on one occasion the symptoms lasted much longer, and he was several weeks before being quite restored. This gentleman was a moderate eater, and moderate in his stimulants; but, on each occasion, his attack was traced to the simple fact of over-distension of the stomach by vegetable foods and fluids, taken too freely at his principal meal.

We shall not delay to inquire what evidence there is of what biologists term molecular *changes* in the *brain*, which sensory nerves are said to give rise to, and which changes are said to evolve the corresponding states of consciousness, as a fellow-feeling, in our ignorance of the exact process of cerebration, should make us wondrous kind in our criticisms. How know we that the inventor of the cerebroscope, who is fated to elucidate the mystery, may not at this moment be occupied in lisping Darwinian numbers and studying Goldsmith or Bingley in his nurse's arms? Let us accept, as the best explanation as yet offered, Professor Huxley's statement that "each sensory impression leaves behind a record in the structure of the brain which is competent, under certain conditions, to reproduce, in a fainter condition, the state of consciousness which corresponds with that sensory impression; and that it is these ideaginous molecules which are the physical basis of memory."

We may add to this statement that each repetition of the sentient impression will render more permanent, and more easily surmounted, the idea, until it becomes almost, so to speak, omnipresent. Nor is this conclusion irreconcilable with the Professor's statement, if I understand him aright—that, in the ordinary laws of memory, ideas recur in a fainter condition than on the first impression.

I recollect, many years ago, being much struck by a very simple circumstance, illustrative of the intensity of such a sensory impression in rapidly evolving consciousness out of a lethargic sleep. I had been taken to see an urgent case at Kingstown, by the last train, on a severe spring night, and had to return to Dublin. Standing beside the stoker on the engine, a particle of coal got embedded in my conjunctiva, which I could not remove. After tossing on my bed for three or four hours in torture, I got up at about four o'clock, rushed to the house of a friend, an eminent oculist, at the time a Benedict. I made my way to his bedroom, found him in a lethargic sleep, as he was only two hours in bed, exhausted by hard work, superadded to by literary labours extended into the short hours. I endeavoured to arouse him with a piteous detail of my sufferings, uttered at the pitch of my voice, but got no response. I shook him with some violence, again and again, but could not provoke the slightest consciousness. At last, on the eve of giving up the cruel attempt to disturb his sweet slumbers in despair, I changed my tactics, stooped down, placed my mouth close to his ear, and uttered—"I have got a spark in my eye." The word eye had not struck upon his tympanum until his consciousness was roused to an intensity that startled me. He sprang

with a sudden bound from his bed, "all there." He obeyed to the letter the behest of Waller, one of Ireland's sweetest poets :—

"Don't be looking at all
For your cloak or your shawl,"

placed me on a chair in the strong morning light of the bursting dawn, seized a lancet, everted my eyelid, and removed the spicula in less time than I uttered the talismanic word which struck the cord that, on Huxley's principle, impinged upon the ideaginous molecule.

The cerebration in sleep, and in the delirium of fever as well as in other hallucinations, appears to throw some light upon these sensorial impressions, and their permanency in certain cognate conditions. The absence of the power of comparison would seem to be the defect that prevails in all. The ideaginous molecules, so to speak, would appear to thus have their full play uncontrolled by reason, and the imagination runs riot. Under these circumstances, if a number of them get excited at the same moment, they revel without restraint, exciting an incongruous crowding of ideas upon the sensorium, and producing no fixed or distinct impressions capable of being imprinted upon the memory or recalled to the recollection. These phenomena are familiar to most people from their experience of disturbed dreams and febrile mazes. On the other hand, the reverse state occasionally occurs in sleep, fever, and mania.

Let only one or a few ideaginous molecules be excited to action at a time, with the restraints of comparison and judgment removed ; let this excitement continue or be repeated—the idea, dream, or hallucination is stamped upon the mind—it is recollected, but it is corrected in our waking by the powers of comparison and reason, and the influence of external impressions. Not so, however, in fever or mania. The correcting powers are, in these morbid conditions of the brain, suspended or interrupted, and the impressions continue unchecked during the waking hours.

The pertinacity with which some of these impressions adhere to patients, even for weeks after recovery from fever, is very remarkable. A young gentleman suffered from typhoid fever for six weeks, in the progress of which he imagined that he had come into the possession of a very large property. This was the primary false sensory impression, and occurred early in the fever. It recurred so frequently that it never for a moment seemed absent from his mind. He was perfectly reasonable upon every subject save this and the consecutive train of thought which the possession of his wealth called out. For instance, he had a magnificent stud of horses and drags, and handsome equipages, grooms, and liveried servants, a mansion in town, and a country residence. He hunted, he drove his drag, and offered the use of his horses, equipages, and money to those about him ; he settled a thousand pounds upon his nursetender, offered ten thousand pounds to every member of his family, and presented his doctor with his own favourite riding horse ; whilst on every other subject he was perfectly sane.

I never, in fact, witnessed a happier patient than he was whilst labouring under this hallucination. He recovered perfectly from the fever, but the hallucination remained for nearly two months after its subsidence. In this case the ideaginous molecule was so deeply impressed by the continuance of the false idea throughout the fever, unchecked by comparison, that, although the reasoning faculty was complete in every other respect, it failed to correct the hypertrophied sensorial impression. If these views hold, they will help us much in psychology, and particularly in monomaniacal hallucinations.

Inquiring how a patient in high fever, with gout in both limbs, passed the night, his answer was—"Horribly; I was in agony; the Catholic leg got on the top of the Protestant leg, and crushed it down, and lay upon it all night." I should mention that this case occurred many years ago, and the patient had been a zealous fire-eating member of the old Dublin Corporation. His healthy cerebation disturbed by the fever, and his sensations engrossed by the agony of the limbs, intensified by a sudden translation of the gout to the Protestant or right leg, in the course of the night his sympathies, unrestrained by healthy ratiocination, naturally went with the leg most pained and least movable, and he identified the aggrieved member with his politico-religious party, although this was his only hallucination, and remained steadily fixed in his mind for several days, until the fever subsided. I should say that the most marked cases of what Aristophanes designates as *Κακοδαίμονία* are of the politico-religious kind.

The prevalence of a "ruling passion" is ascribable, most probably, to the preponderating and unrestrained influence of an hypertrophied ideaginous molecule; and monomania may be thus accounted for, as well as the persistent mischief perpetrated by certain children, and the extravagant conduct and language of those children come to manhood and even old age who ride their hobbies to the death. We are not wanting in such instances in our own imaginative land, and an observant philosopher might detect some such within the walls of a certain great House across the Channel.

I was consulted lately about a charming boy, little over two years of age—intelligent, quick, submissive, and as obedient as a child of that age could be, save that his ruling ideaginous molecule was possessed by a legion of devils of destruction, over whose influence he could exercise no control. Everything he could carry was thrown into the fire or the bath; teacups, bowls, jugs, basins, were upset, and their contents emptied on the table or floor. The moment he accomplished his mischief he seemed to regret it, and submitted himself to punishment, but the next moment he was on the alert for fresh "diablerie," punishment not having exercised the slightest influence in restraining him. It is to be hoped that the education and exercise of the moral faculties may gradually enable him to control his propensity, but if he remains under it, as the hobby-riders just referred to, he will turn out a remarkable man. In

support of the organic descent, it should be mentioned that for three generations this family never was without a mischievous boy. The former children fortunately grew out of it.

Although it is quite true that no two creatures possessed of life, either in the animal or vegetable kingdom, are absolutely alike in every respect, yet it is equally true that structural peculiarities descend from parent to offspring, and this through successive generations. A knowledge and application of this fact has led to the propagation of varieties in both kingdoms. It is, too, a fact that evinces itself markedly in the propagation of disease, and one that, as physicians, we cannot be too watchful of, although much may be done to break the chain that fetters the irresponsible son with his father's perhaps well-earned malady. If gout prevails in a stock, abstinence and active pursuits may accomplish it; if scrofula, proper diet may do so.

Although gout is generally a disease of advanced life, it is a mistake to suppose it to be so limited. I have met with well-marked attacks of gout in childhood, and even in infancy, in families in which the gouty habit prevailed. It is purely and essentially a disease of repletion, or want of proper balance between the secretants and the excretants, whenever and wherever it appears, and although no doubt, in certain forms and certain habits, it runs a course *coûte que coûte*, it then becomes a justifiable object to secure its speedy development in a safe place, and thus prevent (if possible) its seizing on a vital organ. These cases constitute what we should consider the exceptions. Unfortunately the profession rarely see gout unless either in its most severe and acute stages, or after gouty lesions and degenerations have been permanently established in exhausted gouty habits. Consequently they have to deal with the wolf at the door in the former case, and there is little to be done in the latter, and in such cases the axiom of our late witty confrère—"Treat your gout like a gentleman, or he will treat you like a blackguard"—is quite true. But if there is any fact I am satisfied of it is this, that the general application of such a principle is highly objectionable, and (if acted upon) productive of an infinity of suffering and mischief.

Gout, whether hereditary or sporadic, is acquired by the sufferer, and may be prevented in ninety-five cases out of every hundred in which it is first anticipated, and in forty out of fifty of those in whom it has appeared, without the absolute establishment of a confirmed gouty habit. On this subject I would recommend the reperusal of the article of the late Dr. Barlow, of Bath, published in the "Dictionary of Medical Sciences," premising that the use of the lancet and free depletion there practised would, in gout as in other inflammatory affections, be inapplicable at the present day. In hereditary gout it is even more necessary, and, I need not add, more difficult, to prevent the outbreak of the disease than in sporadic gout. In the former it can only be done by altering the predisposed gouty diathesis that prevailed *ab initio*; in the latter it is to be accomplished by preventing the occurrence of such a habit.

I trust you will excuse me if I claim to speak with a large and long experience and feeling, general as well as personal, on this subject, and permit me to take you into my confidence upon it when I say it amounts to this, that I have never met with half a dozen adult cases in my life, at home or abroad, in which I was not able to trace out the development of gout in the individual to his own mismanagement of food, habits, and exercise, and this whether the hereditary predisposition did or did not exist.

It is all very well for us to rail at our parentage, but in looking for the congeners and ancestry of gout we may safely adapt the language of Thackeray's "Rosalba :"—

"Boosy habits was my brudder ;
Beef and mutton was my mudder,
Never knew of any udder."

But the application of hereditary influence extends, in the opinion of some of our philosophers, much further than to organic perpetuation in the species of structural peculiarities. Mr. Spencer insists upon ancestral experience descending by inherited organization, which would assist us in accounting for that law which has hitherto so much perplexed us—the law of instinct. In this field of investigation abnormal experience or diseased action may also assist our elucidation.

A lady, twenty years of age, who never had been taught a note of music, and who had not displayed the least knowledge of poetry, was seized with mania. It assumed the markedly hysterical form ; and, although she had never sung a line of music or composed a line of poetry, she improvised for days almost unceasingly the most charming rhythmical verses, uttered in the sweetest melody. Her hallucination passed into a religious ecstasy, and her instinctive faculty of song and verse was so exquisite as to touch the sensibility and soften the heart, whilst they caused astonishment in the minds of the coolest headed persons who heard her. For my own part, I could not have believed in the possibility of such a phenomenon if I had not witnessed it.

How far was this inherited organization ? She had lost her mother, who was a good musician, when an infant ; her father was a man of high cultivation and great ability.

In addressing those around me, amongst whom I detect many whose pursuits have this aim, "*Dotare vitam humanam novis inventis et copiis*," I cannot conclude more appropriately than in the language of the father of the inductive philosophy, uttered at the conclusion of his "Instauratio Magna." Bacon, after outpouring his soul in a prayer of deep feeling and solemnity, which I would strongly commend to the reperusal and consideration of philosophers and their critics alike, adds—"Having thus concluded our prayers, turning to men, we both offer some salutary admonitions, and make some just requests. First, we admonish men (as we have also prayed) that, as regards divine things, they keep their senses in their proper office.

For the senses, like the sun, reveal the surface of the terrestrial globe, but close and seal up that of the celestial. Next, that, in their avoidance of this error, they may not fall into the opposite, which will certainly be the case if they consider the investigation of nature in any respect prohibited, as if by interdict. For it was not that pure and innocent knowledge of nature by which Adam gave names to things, for their properties, that was the origin or occasion of the fall, but that ambitious and imperious desire for moral knowledge, distinguishing good from evil, with this intent, that man might revolt from God and govern himself. This was the ground and the means of temptation. With regard to the sciences which observe nature, the sacred philosopher declares, that 'it is the glory of God to conceal a thing, but the honour of kings to search out a matter'—just as if the divine nature were amused with the innocent and gentle play of children, who hide themselves that they may be found; and, from its indulgence and goodness towards mankind, had chosen the human soul as a playmate for itself in this amusement."

Obstetric Summary.

Hypodermic Injection of Ergot in Post-partum Hemorrhage.

Dr. P. C. Williams, of Baltimore, in a paper read before the Medico-Chirurgical Faculty of Maryland, 1874, recommends the hypodermic injection of the fluid extract of ergot in post-partum hemorrhage. He gives in detail three cases, in which he has found its use most advantageous in stopping severe flooding. In two of the cases it was not tried till after other remedies had been employed to no purpose. The effect of the hypodermic was almost instantaneous, and it was permanent. The fluid was injected in the inside of the thigh, and in no case was an abscess produced.

Puerperal Mastitis.

Dr. Helby, of Bautzen, writing on this subject, recommends the application of warm compresses to the inflamed breast, in the place of the usually employed linseed-meal or bread poultices. The compress is to be applied as follows:—A piece of lint, four folds thick, sufficiently large to cover the inflamed part, is steeped in warm water (78° to 86° F.), and then squeezed almost dry; this is placed on the breast, and over it a piece of gutta-percha or caoutchouc protective, larger than the lint, and the whole is covered with a quantity of cotton wool and bandage. The dressing can be kept on from five to six hours, and the inflamed part is kept in a continual vapour and steam bath. This dressing is much lighter than a poultice, which weighs from five to seven ounces, is much more comfortable to the patient, and does not require so frequently to be changed as the poultice. Its efficacy is even greater. It may be employed after an abscess has formed and opened.—*Berlin Klin. Woch.*, No. 39-74.

Exfoliation of the Mucous Membrane of the Bladder, in a Case of Retroflexion of the Gravid Uterus.

Dr. S. Brandeis, of Louisville, reports the following case:—He was called to see a woman, aged 36, previously in good health, who had suffered for three days from retention of urine. She had had three children. On examination, the bladder was found to be distended upwards from the symphysis to about two inches above the umbilicus. In vaginal examination, the cervix uteri was soft and pressed against the symphysis; the posterior part of the pelvis was filled with a hard, immovable and semi-globular tumour, separated from the cervix uteri by a distinct furrow. The patient said she had menstruated regularly, and was last so two weeks ago, so the swelling was supposed to be a retro-uterine hematocele. A gum elastic catheter was passed its whole length and drew off a large quantity of strongly ammoniacal, muddy, flocculent thick fluid; this much eased the patient. A catheter was then left in the bladder. The patient improved, and, on a second examination, the tumour was found much the same, but some fetal parts were recognised. The patient was placed in the knee-elbow position, and the uterus was easily pushed up and replaced, two fingers of the right hand being passed into the rectum, and one finger of the left passed round the cervix. In two days the patient was able to empty the bladder and complained only of frequent micturition. Four days after, Dr. Brandeis was again called to her, and found that she had been suddenly seized with severe pains, and found that something was being expelled from the genital organs; her husband seized this, and drew away a long shred of skin. This was found to be a complete cast of the mucous membrane of the bladder, thickly coated with crystals of the urinary salts. The patient quickly recovered, and two months later was delivered of a mature and healthy child.

Chemical Examination of the Fluid in the Hydatidiform—Degeneration of the Ovum.

Gscheidlen has made a chemical examination of the fluid contained in the cysts of two such moles. The first of these moles examined weighed about $2\frac{1}{4}$ lb., had developed for four months in the uterus, and consisted of a mass of clear cysts, varying in size from a pin's head to a pigeon's egg, joined together by connective tissue. On collecting the fluid from these its consistence was found to differ. From the smaller cysts it was thicker, and contained about 29 parts per 1000 solid matter; from the larger the fluid was thinner, and contained 17 parts per 1000 of solid matter. The solid matter was albumen, mucin, inorganic salts, and phosphates. No trace of fibrinogenous substance, paralbumin, or sugar, was able to be detected. The second mole, five months' old, weighed over 3 lb., and was made up of large cysts. The result of the chemical examination was the same. Leucin and

tyrosin, but in a much less quantity, were found in the fluid from both moles. In the fluid from the older mole the quantity of the solid matter was increased: in the four months' old mole 19 per 1000; in the five months' old mole 26 per 1000; and the quantity of mucin in the fluid diminished with the age of the mole, whilst the albumen is increased. Comparing this with the amniotic fluid, we see that the quantity of solid matter per 1000 lessens at each month. Thus Vogt found at the fourth month about 20 parts per 1000; at the sixth about 9.7 per 1000. Sclerer found at term 8.5 per 1000. The result of the examination of two specimens of amniotic fluid for leucin and tyrosin was negative.—*Archiv f. Gynæk.*, Band vi. Heft 2.

On the Absence of the Fetal Pulse during Extraction of the Feet.

By Professor DOHRN, of Marburg.

Most accoucheurs admit that a child, the pulsations of whose heart had been stopped during extraction, cannot be brought to life again in the cases in which this arrest of the pulse beats has been ascertained by repeated examination. Some even advise that all efforts at extraction should then be given up and that delivery should be left to nature, convinced that the pains will then expel the after coming head in a manner less dangerous to the mother than when the operator, even if he be ever so able, continues his attempts at extraction.

I had been for some time disposed to reject this mode of procedure, when latterly two recent cases have again taught me that during the disengagement of the feet, a suppression of the pulse prolonged even for a long time, does not for a certainty prove fatal to the infant. The two observations are as follows:—

1. A woman delivered for the second time with a flattened and generally contracted pelvis. Complete presentation of the feet with prolapse of the funis. Rupture of the membranes with dilatation of the os. Almost immediately falling of the feet and funis into the vagina,

The fetal pulse, which some instants before the rupture of the membranes beat 160 times in the minute, fell half an hour after to 120, and at the same time there was a flow of meconium. I decided on extracting. This was easily done as far as the shoulders, but I could not bring down the arms which were raised. During my fruitless attempts to disengage the arms the pulse disappeared at the funis, as also did the pulsation of the heart which up to then one could see and feel on the part of the thorax which was disengaged. Full two minutes elapsed whilst palpation was being repeated in the cardiac region, and the introduction of the points of the fingers into the intercostal space permitted the determination of the disappearance of the pulsation, until then appreciable. I considered the infant as dead, and faithful to my principles I resolved to abstain from further attempts at extraction, so as not uselessly by violent traction to wound the soft parts of the mother.

At this moment the child, whose pulse could not be felt, and who

was half-born, made several inspiratory movements, to the great astonishment of the assistants. I immediately renewed attempts at extraction, and succeeded in a few minutes in disengaging the arms and the head. The child, a girl, after a quarter of an hour's care was reanimated in a warm bath. The mother and child both went out well at the end of a fortnight.

2. A woman delivered for the third time ; flat pelvis, generally contracted. The two previous confinements of dead children necessitated application of the forceps and perforation. The woman came to me to have premature labour induced.

Delivery took place in the thirty-seventh week. After a very slow period of dilatation, at the moment of rupture of the membranes the two feet and the cord prolapsed, the dilatation of the orifice being but six centimetres. As the pulsations of the cord were rapidly slackening, I left the delivery to nature. But after the disengagement of the hips, the descent of the child was suspended, and in spite of strong external pressure exercised by one of the assistants they remained as they were. The first attempt to disengage the raised arms was fruitless, and having immediately afterwards practised an examination of the cord and cardiac region they escaped, I could not find any trace of pulsation. A second attempt answered no better, and so three minutes elapsed during which it was impossible even with the greatest care to feel any cardiac pulsation in the half-born fetus. I had here doubts as to the possibility of recalling the infant to life.

Then a strong pain made the shoulders and head descend so low that disengagement by means of the hands appeared possible. Though I had but little hope of the child, I finished the extraction, which was rapidly done. The child presented no signs of life when born. I placed it in a hot bath, and after I had put it in half a minute the heart began to beat again at the rate of forty-eight pulsations a minute. Whilst the heart had but this feeble number of pulsations, a profound inspiration took place. The heart's beat paused from time to time, but, what struck me very much, did not recover their normal frequency so soon as the efforts at respiration. It was not till the end of half an hour's care that the frequency of the inspiratory and pulse movements attained their normal figure. The child, a boy, revived and was saved.

These cases are similar in their essential points. In both there were narrow pelves, cessation of the pulse at the moment when the after-coming head descended into the pelvis, and prolonged absence of the beats whilst the head was arrested in the true pelvis. I believe the same explanation applies to the two cases.

If there had been a case of arrest of the heart's beat caused by asphyxia, there would have been difficulty in restoring the children to life. For my part it has never happened to me to bring a child to life again with such a cessation of the heart's beat of such long duration when it was caused by asphyxia.

But more than this, the course of these cases is not at all that which one is accustomed to meet with in asphyxia. In the second case the child was full of life a little while before the cessation of the heart's beat, and this cessation was produced when the head by aid of traction below and pressure above escaped from the pelvis. Immersion in a warm bath brought back the heart's beats, but the respiration established itself still more quickly. In asphyxia, as we know, the reverse is habitually the case.

This arrest of the beats of the heart in these two cases was in my opinion caused by compression of the brain and irritation of the pneumogastric.

Although Frankenhaufen (*Mon. für Geburt.*, Bd. xv. Heft 5, 1860) first gave out the idea that compression of the head might slacken the child's pulse, this opinion was hardly taken into consideration, although already a number of facts had been collected which rendered the connexion between these phenomena very probable. (Dissertation published under the direction of Roser, "On the Slackening of the Pulse from Compression of the Brain," by C. H. Lengerkes, Marburg, 1856.) But since the works of Leyden (Virchow's *Archiv*, xxxvii. Heft 4) and of Schwartz (Virchow's *Archiv*, Bd. i. Heft 3) on these phenomena, the preceding explanation seems perfectly well grounded. Leyden has shown in the clearest manner that the compression of the brain which slackens the heart's beats may also completely arrest them, and that this action is produced by the help of the pneumogastric. It results, moreover, from his experiences that the activity of the heart is constantly altered by compression of the brain, the same as the respiration, and like Schwartz, he has found that cessation of the compression permits the activity of the heart to be reproduced anew. My clinical observations accord with these experiments.

But extraction in breech presentations gives rise to compression of the brain, especially in contracted pelvis, and I suspect that one has often enough had opportunity of verifying this fact if one had paid more attention to the matter during extraction. I would therefore ask scientific men to pay attention whether in analogous cases, given a hindrance to progression of the head with compression of it, slacking and entire arrest of the heart's beats are not observable.

It is the way of looking at the cause of slacking of the pulse which must direct us to the treatment of these cases. Admitting that slacking and arrest of the pulse are due to compression of the brain, we must then hasten, by the most rapid extraction of the head possible, to protect this latter from compression, and one may then entertain the hope of saving the child. But if on the contrary the arrest of the heart's beats appears to be due to asphyxia, we cannot hope to save the child's life, and nothing is gained in the interests of the mother, at least usually, by continuing attempts at extraction.—*Archives de Tocologie*, October, 1874.

Uterine Fibroids—Pregnancy—Dystocia—Cesarian Section. Mother and Child saved.

By Dr. CAZIN (de Boulogne).

At the Lille Congress of the French Association for the Advancement of Science, Dr. Cazin brought forward a case of the above. Uterine fibromata cause a mortality of one in five during accouchement. Their presence has given rise to a great number of Cesarian operations, which have all been followed by death. Most frequently the presentation is of the breech or side.

Dr. Cazin has had occasion to practise the Cesarian operation in a case of this kind, and has had the good fortune to save mother and child. He operated on a woman, aged thirty-nine, in whom, towards the sixth month of pregnancy, fibroid tumours were recognised in the posterior and inferior wall of the uterus. Labour set in in the seventh month; after four days of pains, the waters ruptured and the hand escaped, the child still living; but as it could not be extracted either by forceps or by version, recourse was had to the Cesarian operation. The most minute precautions were taken; there were hemorrhage and syncope, inertia of the uterus, distension of the belly to such a degree that it became necessary to puncture the bowel to give exit to gas; there was vesical paralysis and an abscess formed between the uterus and the abdominal wall. In spite of all these complications, the patient got well; and the child, baptized Cesar, thrived well. This operation was done some months ago, but the author has ascertained that the fibroids are in process of diminution. —*Gaz. Méd., &c., Paris*, Oct. 3, 1874.

Dr. Richardson on the Effect of Blood-letting in Eclampsia.

“On May 29, 1873, Mr. Burton, of Richmond-terrace, West Brompton, summoned me to see a lady whose symptoms were nearly the same as in the case described above (eclampsia). In this lady the most marked peculiarity of the labour, so Mr. Burton told me, was the excessive discharge of amniotic fluid. After delivery she became comatose, insensible, and vehemently convulsed. Her face was congested, her veins tense, her pupils fixed, and her temperature high—103° Fahr. Before my arrival the patient had been bled freely from the arm, and the more alarming symptoms had subsided; but the jugular veins were still tense, the temperature was 102° Fahr., and the unconsciousness continued, with an occasional convulsion. Confirming fully the treatment that had been pursued, I recommended the abstraction of still more blood by leeches, together with continued application of a collar of ice around the neck. I learned afterwards from Mr. Burton that the amendment in the symptoms continued, and that recovery took place without any interruption. Mr. Burton was so good as to take me to see this patient a few months ago. I found her quite well, and I could gather nothing from her that could lead to the remotest suspicion of her having

suffered one single harm from the remedy which, I am morally sure, saved her life.

“NOTE.—The phenomena of coma and convulsion after labour, in cases such as are here described, are, I believe, phenomena of uremia. The symptoms are identical with those of uremic coma, and the cause is not far to seek. The kidney, subjected to intense pressure during the latter term of pregnancy, is suddenly relieved by the escape of the excessive amount of amniotic fluid and birth of the child. Thereupon into the half-paralysed vessels of the kidney there is an influx of blood, a temporary but effective congestion, and a state of things analogous to that which occurs when the nervous supply of the kidney is divided. The effect of the abstraction of blood in this condition is to afford immediate relief to the congestion of the vessels, to enable the kidney to resume function, and to let the order of the economy proceed.”—*Brit. Med. Jour.*

Morton on Transfusion of Blood.

The following report from Dr. Madge, the Secretary of the Transfusion Committee of the Obstetrical Society of London, appears in the *London Medical Record* :—

“Dr. Thomas G. Morton, of Philadelphia, has published, in the *American Journal of the Medical Sciences*, July, 1874, a paper on Transfusion of Blood, with a report of eight cases and a description of a convenient apparatus for performing the ‘mediate method.’ The paper commences with the pretty usual, and perhaps pardonable, flourish about the transcendant powers of transfusion—pardonable, because to achieve success in any direction is a legitimate ground for being somewhat enthusiastic about the means employed. Dr. Morton says, ‘Transfusion of blood may be so readily performed, and with such entire safety, that it is somewhat surprising that this recognised life-saving operation has not been resorted to more frequently.’ The details of three cases are given in full. The first was a case of lacerated wound of the face, occurring in a young man of hemorrhagic diathesis. All the means used—including tying the common carotid—failed to arrest the bleeding, until at length he appeared to be in a comatose condition, and dying. On October 20, 1869, eleven ounces of defibrinated blood were transfused. A marked rigor followed the operation. In two hours the patient was semi-conscious. On October 21, the lips had a better colour, and the patient was perfectly rational, able to sit up, bleeding ceased. On the 26th he was walking about the ward, and was presented to the medical class. He continued to improve till November 3, when the internal jugular vein gave way, causing death on the 5th. The operation prolonged life over two weeks. The second case was one of carcinoma of the stomach, with leucocythemia and great prostration. The patient, Mr. C. K., aged forty-five, was greatly blanched from mal-assimilation of food, and speedy death seemed inevitable. On November 12, 1870, about six ounces of defibrinated blood was injected into the median basilic vein of the left arm. No unpleasant symptom was observed, either in the respiration or circulation, during or after the operation. The gums and lips of the patient, which had had a blanched appearance, assumed a decided tint, which gradually

deepened; the strength and spirits revived, and in all respects a great improvement was observed. Two months afterwards the health again rapidly failed, with constant sickness, and death occurred March 23, 1871. In this case (Dr. Morton says) transfusion gave temporarily a new lease of life. The third case was one of purpura hemorrhagica, with nasal and alveolar hemorrhage. Ida H., aged eleven, after a long previous illness, on February 7 and 8, 1874, was almost bloodless, and death seemed imminent. Transfusion being agreed to, the median cephalic vein in the left arm of the child was opened after much difficulty, on account of the small size and collapsed condition of the vessel. Two ounces of blood were injected. No unpleasant symptoms supervened. The pulse, which before was imperceptible, could now be counted. The patient began to take more food, was able to move about, and progressed favourably until March 29, when serious hemorrhage came on from the falling out of a tooth. The next day purpuric spots reappeared, and she became again very prostrate. Transfusion was at once performed. Six ounces of defibrinated blood were injected with immediate good effect. There having been a difficulty with the vein in the arm on the previous occasion, the saphena vein of the right leg, just above the ankle, was selected. On April 7 she was doing well, was up and about as usual, had excellent pulse, and no appearance of having lately suffered the loss of so much blood. On May 26 she was in perfect health.

“Dr. Morton gives short notes of five other cases sent to him by Dr. J. G. Allen. Three of these cases were successful. One patient lived eighteen months after the operation, and then died from hemorrhage after a miscarriage. Of one case Dr. Allen says: ‘You will remember we accidentally’ (Dr. Morton was present at this case) ‘passed into the vein two or three little bubbles of air not larger than a pea—a kind of froth which had collected upon the blood in the syringe; this was followed by, and the probable cause of the fit of gasping and threatened syncope which lasted about half a minute, and which at the time was attributed to want of air from many persons crowding over the bed.’ This patient made a good recovery. In all the cases human blood was employed. The instrument used by Dr. Morton is simply a slight modification of an ordinary glass syringe—to hold about two ounces. It has a chamber for warm water.”

Two Cases of Post-partum Hemorrhage treated by the Injection of Perchloride of Iron.

By W. P. SWAIN, F.R.C.S.

Without wishing to fan into a flame the dying embers of controversy on the subject of the injection of perchloride of iron in post-partum hemorrhage, I desire to put on record the two following cases which have occurred in my practice during the last six months.

CASE I. was that of an exceedingly fine, handsome lady, a primi-

para. Her pregnancy had been uninterruptedly good. Labour commenced on the evening of January 21st. The presentation was normal, the pains good, and a fine male child was born about half-past seven on the morning of the 22nd. I gave a small quantity of chloroform at the last. Immediately after the delivery of the child, I found a second head presenting, and, as the pains were not very expulsive, I put on the forceps and delivered a second male child in a few moments. I then removed the placenta, which was single and of enormous size. Considerable hemorrhage occurred at the moment the placenta was expelled, but the womb contracted firmly, and a binder was put on. Within a few minutes, however, I found the uterus largely expanded, and, on pressure, a huge clot was expelled. I immediately introduced my left hand into the uterus, making pressure externally with the right, but was unable to produce any uterine contraction. During the whole time there was a constant and excessive flow of blood from the vagina, and the patient became collapsed. I administered brandy in large quantities and ergot, and the moment ice could be obtained I placed a large lump in the cavity of the womb, and a bag of ice on the abdomen. All was, however, of no avail, and my hopes of saving the patient were at zero. In the meantime, I had obtained further professional assistance, and, with the concurrence of my father and Mr. Whipple, I injected perchloride of iron into the uterus, in the manner advised by Dr. Barnes. From the moment of the injection all flow of blood ceased, although the uterus remained for some time flaccid. The lady made an excellent recovery, and, with the exception of a little lymphatic tenderness in the right thigh, complained of nothing during her convalescence. I should mention that, on the second day and on every succeeding day for some time, the vagina was thoroughly well syringed out with Condy's fluid and water.

CASE II.—I was asked by Surgeon-Major Ferguson to see at the Women's Hospital, on July 9th, a soldier's wife in her third pregnancy. She had a contracted pelvis in its antero-posterior diameter. In her first confinement she remained a hundred and eight hours in labour; in her second, eighty-seven hours. No instrumental assistance was afforded on either occasion, and the children were still-born. This time she had been in labour sixty hours, and I found the head well down on the pelvis, but tightly fixed there. I suggested the application of the forceps, and in a very short time, after the use of considerable traction, the child was born alive, but lived only for half an hour. The placenta was removed at once without difficulty, and the uterus contracted for a short time, but in a few moments tremendous hemorrhage set in, the blood being projected from the vagina on to the floor some distance from the bed. I immediately passed my left hand into the uterus, cleared out its contents, and endeavoured to secure contraction, whilst cold water was poured on to the abdomen from a height, and brandy freely administered. This, however, did not correct the bleeding, although it somewhat lessened in quantity.

Feeling that another gush of hemorrhage might be fatal, I injected the perchloride, all the materials being fortunately at hand. The uterus at once contracted, all hemorrhage ceased, and I hear from Dr. Ferguson that the woman has made an admirable recovery.

I think I may fairly claim two lives for the perchloride treatment. In the first case, all the usual resources, excepting galvanism, were tried in vain; the lady lay dying before our eyes, and there can be no doubt that any further hemorrhage must have turned the balance against her. In the second case, so rapid and so large was the loss of blood, that nothing short of *immediate* arrest could have saved the patient; and this the perchloride certainly effected.—*Brit. Med. Journ.*

Gynecic Summary.

Sarcoma of the Uterus.

Dr. Kunert, writing on this subject (*Archiv für Gynæk*, Band vi. Heft 1), after giving the completed history of six cases which he had the opportunity of watching till the fatal end (these cases had previously been published by Prof. Spiegelberg), gives a *résumé* of the chief points in the pathology of the affection. He then speaks of the course, diagnosis, and treatment. Sarcoma of the uterus has not been known to occur before puberty. The progress of the disease is very rapid, and always terminates fatally. From the moment a tumour is discovered presenting the characters of a sarcoma, the advance is rapid; the alteration in the general condition of the patient most marked. In 14 out of 30 cases death followed within a year after the tumour was recognised, in 1 after two years, in 3 after three to six years. In three cases the general condition of the patient was fair after two years. There is a unique case of a cure reported by Winkel. The diagnosis is generally easy. Carcinoma of the body of the uterus is exceedingly rare, and the consistence of the growth is different. It is easily distinguished from carcinoma of the cervix, when débris of the tumour is found in the discharge. Hemorrhage and pain occur early; but on the other hand great immobility only later. It is difficult to distinguish it from a myoma. The alteration in general condition of the patient usually first arouses suspicion as to the malignancy of the growth. The prognosis is bad, only a little more favourable than in the carcinoma. With regard to treatment, as preventive, every myoma should at once be removed. When the sarcomatous growth is recognised it should at once be removed. If the tumour is circumscribed, the base should be cut through with the knife, scissors, or écraseur. If the growth is diffused it should be taken away with the curette, scoop, finger-nail, &c., as much as possible. Bleeding is best stopped by plugs steeped in the liq. ferr. perchloridi. In cases where it is impossible to operate, fair results are obtained from the repeated injection of a solution of carbolic acid, perchloride of iron, tincture of iodine, caustic potash, or the actual cautery.

Rupture of the Vagina with Irruption of the Intestines.

A Leipsic woman, sixty-three years old, and mother of thirteen children, had suffered for thirty years from prolapsus of the uterus. The organ invariably came down when the patient stood up, sat down, or walked, and formed a tumour as large as a child's head; but it returned spontaneously to its place when the patient lay down. One day, when she was going upstairs, and carrying a load, prolapsus of the uterus took place; as she tried to put it back she felt something come out, and in fact, at that moment there took place an irruption of the intestines. Eight hours afterwards Dr. Feling found her in a state of collapse; the small intestine was projecting from the vulva, forming a mass the size of an adult's head. The intestine was of a purple colour, cold to the touch, and no peristaltic movement was visible. Every attempt at reduction was useless, and the patient died eleven hours after the accident.—*Arch. für Gynäkologie*.—*Paris Med. Record*.

Retroflexions of the Uterus.

By Dr. COURTY.

This distinguished gynecologist read a memoir on retroflexions of the uterus before the Lille Congress of the French Association for the Advancement of Science.

Dr. Courty said retroflexions distinguished themselves from antelexions as much by their etiology as by their symptoms. Whilst antelexions formed an almost normal curve in women who have never been delivered, retroflexion constitutes a true uterine break resulting from delivery. For redressing the uterus we should have recourse not to supports left within the womb, which may bring about accidents, but to a support applied two or three times a month during some hours. In that way one may cure the retroflexion, but most frequently we transform it into a simple retroversion, a lesion which exposes the patient to much fewer accidents.—*Archives Générales de Médecine*, October, 1874.

*Pædiatric Summary.**Lactation in the Infant.*

Dr. Edis, in the *Lancet*, relates three cases in which this condition apparently existed. In the first both breasts were affected, and a thin watery secretion could be expressed or oozed from both nipples. In the second the left breast was affected, and a secretion more like whey than milk exuded. An abscess formed. In the third case both mammæ became inflamed about the third day; a thin serous fluid flowed from the nipples. An abscess also formed in this case, and it was suspected that the grandmother had sucked the breasts.

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Original Communications.

ON THE STRUCTURE OF THE MUCOUS MEMBRANE OF THE UTERUS AND ITS PERIODICAL CHANGES.

By JOHN WILLIAMS, M.D. Lond., M.R.C.P.
Assistant Obstetric Physician to University College Hospital.

THE study of the changes which take place in the human uterus during the period which elapses from the cessation of one menstrual flow to the cessation of the flow next following, is rendered difficult not only by the obstacles usually met with in the study of all physiological processes, but it is rendered peculiarly difficult by the fact that the greater number of women who die during the menstrual life (15-45 years) perish either after parturition, or after long-continued chronic disease. In the former cases, menstruation has been suspended for nine months, and the uterus has undergone those changes which are produced in it by the impregnation and development of the ovum. In the latter cases, menstruation has almost without exception ceased for months, or perhaps for years before death.

It is only very rarely therefore that uteri can be obtained in which, at the time of death, those changes were taking place which occur normally in the organ during the menstrual flow and the intermenstrual interval.

There is yet another reason why the process of menstruation is surrounded by so much of obscurity and doubt, and that is, that even when opportunity has offered for the examination of uteri which at the time of death were undergoing the normal periodical changes peculiar to the organ, it has not been taken sufficient advantage of, for the organ, however carefully examined in other respects, has been examined, as a rule, without regard to the date of the last periodical discharge, as well as to the time when the next flow would have taken place had the patient's life continued, excepting indeed those cases in which the uterus was found to present evidences that the menstrual flow had already commenced, or was imminent.

It is, however, not possible to obtain an accurate knowledge of the history of the uterus during the fertile portion of female life, except by a careful study of the cycle of changes which takes place in the organ monthly. This knowledge is to be attained only by the investigation of a series of uteri of women who have died at different stages of the menstrual and intermenstrual periods; and this investigation should be conducted with a due regard to the position of each uterus in the series, by bearing in mind the interval which has elapsed since the last flow, and the interval which would have elapsed had the person lived, before the appearance of the next.

It is from a disregard of these precautions that the mucous membrane of the uterus has been so differently described by different observers; the reason being, that some have described the membrane when it had attained its highest stage of development, and others, while still in progress of growth; so that some have characterized it as being thick and possessed of numerous large glands, others as being thin and possessed of but few glands, while some have even denied the existence of the membrane altogether.

It is the object of this paper to trace the changes which take place in the uterine mucous membrane during an interval of four weeks, or during that interval which elapses between the cessation of one menstrual flow and the cessation of the next following. It consists of observations made on

the uteri of twelve women who had died in different stages of the menstrual or intermenstrual periods. These uteri form a complete series, and in all but two of them the date of the menstrual flow could be fixed with certainty. I believe, however, that in the two there was sufficient evidence in the condition of the organs themselves—especially when they were compared with the other members of the group—to fix their position in the series. It appears to me that the best point to start from in the study of the periodical changes of the uterus, is that condition presented by the organ at the end of menstruation, for that is a circumstance which can be decided by the history of the case, and, as we shall hereafter see, the condition of the uterus met with at that time has a definite character, and is one with which all conditions subsequently to be observed may be compared.

I shall begin then with an account of this condition as it was seen in the first two uteri of the series, and shall describe the condition met with in the other members, taking them in succession.

1. The first uterus was that of a woman, aged thirty-five years, who had had children, and who had died in the hospital about the ninth day of typhoid fever. She had menstruated for four days previous to her death, and the flow had not quite ceased when that event took place. This uterus had been immersed in spirits for some days when examined.

The cavity of the body was larger than usual. It contained a few shreds of soft membrane together with some bloody mucus. The opposite walls were not in contact. The surface was blood-stained, and attached to it were many small shreds of membrane which gave it an uneven or flocculent appearance. On tracing the lining membrane upwards

FIG. 1.



Diagram of Uterus when menstruation has just ceased, showing the cavity of the body deprived of mucous membrane.

through the cervix of the uterus, it was found to terminate abruptly above the internal orifice with a well-marked margin, and above this point the mucous membrane was wanting.

Dr. Tyler Smith had observed the same thing. He said, "I have had opportunities of examining several uteri taken from women who had died during the catamenial flow. In each of these I found the mucous membrane of the body of the uterus either in a state of dissolution or entirely wanting. In one case the mucous membrane was altogether gone. At the upper part of the cervix uteri the break in the mucous membrane was very apparent. In the cervical canal the mucous membrane was perfect; but at the os internum uteri it ceased as abruptly as though it had been dissected away with a knife above this point" (*Manual of Obstetrics*).

In a section perpendicular to the inner surface of the uterus, the bundles of muscular fibres were seen to extend to the surface, which was stained of a brownish colour.

2. The second uterus was that of a patient who had died of tetanus. No menstrual history could be obtained, but there can be no doubt that the woman died when menstruation was almost over, for the uterus presented appearances very similar to those already described. The surface of the cavity of the body, however, had fewer flocculi attached to it, and therefore presented a more smooth appearance than that of the preceding uterus. This uterus, examined while still fresh, presented on the inner surface of its body numerous points out of which blood could be made to exude by pressure.

Both these uteri were hardened in spirit, and afterwards examined microscopically.

The loose fragments of membrane found in the uterine cavity consisted of very fine granules, small, round, and fusiform cells, small short rod-shaped bodies, like nuclei of muscular fibre cells, together with small short fibre cells. All these elements were in a state of fatty degeneration. The fragments contained also a large number of blood corpuscles. A longitudinal section made perpendicularly to the inner surface displayed the following structure.

Immediately within the internal orifice the muscular fibre cells were exposed in the uterine cavity. There was no layer of cells imposed upon them. Further from the inner orifice and higher in the cavity of the uterus, the bundles of muscular fibres approached the surface and entered the stained superficial layer. This brown layer consisted chiefly of blood-corpuscles, round granular cells, fusiform cells, short rod-shaped bodies, bits of glands and broken blood-vessels; the same structures as were found in the shreds which floated in the sanguineous fluid contained in the uterine cavity. On the addition of *liquor potassæ* these elements were rendered more distinct, and the muscular cells could be seen penetrating into the stained layer, and in many places through it to the surface. This superficial layer was entirely wanting for a small space immediately within the inner orifice; it began a short distance above that point and extended over the rest of the surface of the cavity. It increased in thickness towards the fundus, and was thicker in that situation than elsewhere.

In reference to one of the uteri examined by Dr. Tyler Smith, he said, "I had the assistance of Dr. Handfield Jones in examining this uterus with the microscope, and we could find no traces of epithelium, or of the utricular glands. The surface of the cavity of the body was exactly similar to that which may be seen after abortions, in which the decidua, or in other words the developed mucous membrane, had been discharged." In the specimen now described the muscular cells which penetrated to the surface, as well as those which entered the shreds attached to it, were smaller than those situated deeper in the walls of the uterus. In some situations the muscular bundles ran more or less parallel with the surface of the cavity, in others they assumed a direction more or less perpendicular to it. The stained muscular fibres and cells, as well as the matrix around them, were in a state of fatty degeneration, and doubtless in process of removal. Among the muscular bundles near the surface were many fusiform cells, much smaller than those forming the developed muscular fibre cells and round cells; but in the deeper layers these became fewer and fewer, though they never disappeared entirely. Besides the above mentioned cells there were glands

found lying in the meshes formed by the muscular bundles. These glands are shown in Plate I. Fig. 1. I have been able to obtain them in transverse section only. They were lined by cells, the largest of which measured $\frac{1}{4000}$ inch only in diameter. These cells in some instances assumed a columnar shape, in others a form intermediate between round and columnar; situated deeper in the muscular wall than the glands just mentioned were many groups of small round cells. Under a high power the cells forming some of these groups appeared to be so arranged as to form the walls of a very fine tube coiled upon itself (Plate I. Fig. 1). Deeper still were other groups of very small cells irregularly arranged, which, under a high power appeared only as such. Similar groups of cells were found scattered through the walls of the organ as far as the peritoneal covering.

In this uterus then, in which menstruation had almost ceased, there existed no mucous membrane; immediately above the inner orifice it had been entirely removed, and the muscular wall was exposed in the cavity. Higher up, nearer the fundus, the muscular surface was overlaid by a thin cellular layer of tissue in a state of fatty degeneration, which doubtless represented the remains of the mucous membrane in process of removal. The traces of glandular tissue found in the muscular wall were probably the commencement of a new formation. The appearances presented by the second uterus were similar to those just described.

Kölliker and Heschl maintain that a similar change takes place during parturition, that is, that the mucous membrane of the body of the uterus is entirely removed during that process, and that the muscular fibres become exposed in the uterine cavity. The former observer, however, maintains that during menstruation the destruction of the mucous membrane is only partial. He says, "With the effusion of the blood consequent on the rupture of the superficial capillaries, the epithelial lining of the body and fundus is for the most part thrown off, and its cells are thrown off in large quantities mixed with blood and mucus which fill the cavity of the uterus; on the other hand, we are not to regard as a normal process the detachment of the mucous membrane as a

Fig. 1.

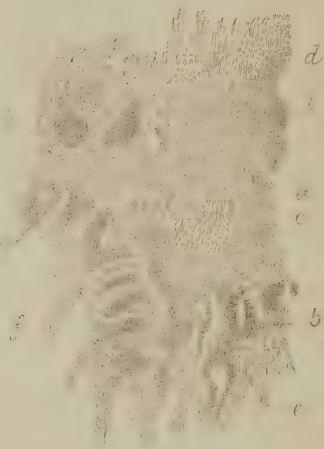


Fig. 4.

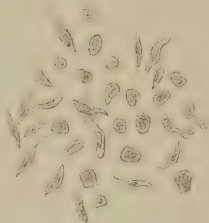


Fig. 2.

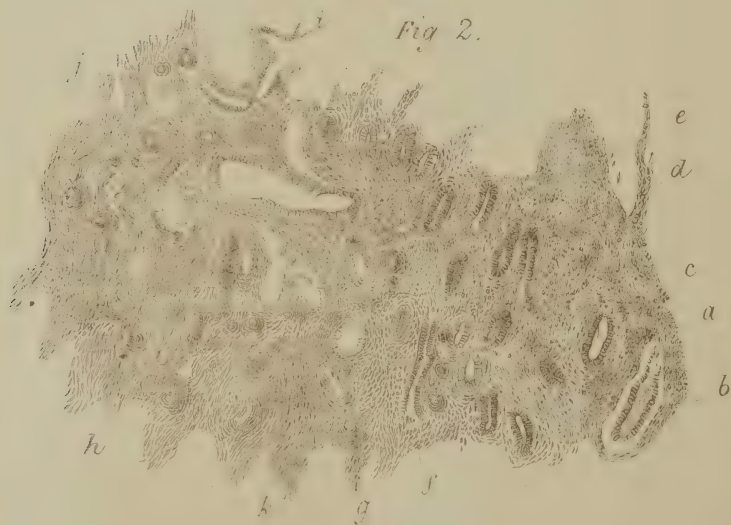
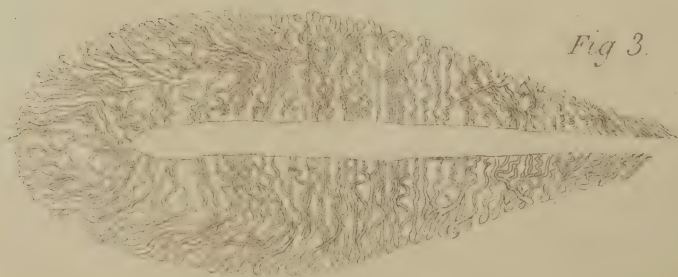


Fig. 3.



DESCRIPTION OF PLATE.

PLATE I.

FIG. 1.—A section perpendicular to the surface, immediately within the inner orifice, of a uterus in which the menstrual flow had almost ceased (Uterus No. 1) $\times 67$.

(a) Inner surface.

(b, c, d) Glands lined by columnar cells, in different degrees of development.

(e, f, g, h) Groups of round cells, which eventually develop into columnar epithelium of glands.

(i) Fatty granules and remains of old mucous membrane.

FIG. 2.—A section perpendicular to the surface, immediately within the inner orifice, of a uterus in which the menstrual flow had ceased three days before (Uterus No. 3) $\times 67$.

The columnar epithelium lining the lower part of the body of the uterus was intact, though not represented in this section.

(a) Inner surface.

(b, c, d, e) Glands lined by well-developed columnar epithelium.

(f, g, h, k) Glands lined by less-developed columnar epithelium.

(i, j) Glands lined by epithelium in a state of transition from round to columnar shape.

FIG. 3 represents the course of the glands in the fully-developed mucous membrane of the uterus—viz., just before the onset of a menstrual period.

FIG. 4 represents the round and fusiform cells forming the inter glandular tissue of the fully-developed mucous membrane.

whole or in fragments, which sometimes occurs after or during the catamenia."

In reference to the state of the uterus after parturition, the same author observes, "the case is different with the mucous membrane, which is completely thrown off after parturition in the form of decidua and placenta uterina, and this has to be entirely formed anew."

Heschl says, "The placenta site, which always occupies a third part of the contracted uterus, still retains a projecting, uneven, and considerably lacerated surface. The rest of the inner surface of the body of the uterus is composed of muscular substance, from which, here and there, hang shreds, the remains of the decidua."

3. The third uterus was that of a young girl, aged twenty years, who had died with inflammation of the lungs, three days after attempted suicide by cutting the throat. The menstrual flow had ceased on the twentieth, and she died on the twenty-third of the month. The inner surface of the body of the uterus was pale and smooth, and the cavity did not seem enlarged. It contained no membranous shreds, such as those described in the two former uteri. The cavity contained but little mucus. On one side, immediately within the inner orifice, was a small prominent fold of mucous membrane, and another similar fold was found near the fundus. There were a few fine blood-vessels freely anastomosing with one another at one spot in the upper part of the cavity, but no vessels could be discovered on any other part of the inner surface. The breach of surface at the os internum uteri, described as having existed in the first two uteri, was less marked in this one, but still it was recognisable. The surface was studded with small white points.

On section the mucous membrane appeared as a very thin, pale layer in the lower two-thirds of the body, to which it was limited. This portion of the cavity was lined by columnar epithelium, the cells of which measured $\frac{1}{3000}$ inch in length. The remaining third of the body, as well as the fundus, was still uneven, having attached to it small slightly brownish shreds, similar to those found in the first two uteri, but much smaller in size. They exhibited a structure similar

to that presented by those in the preceding uteri—namely, fusiform and round cells in a state of fatty degeneration, together with blood-corpuscles and fragments of glands and ends of torn blood-vessels.

FIG. 2.



Diagram of Uterus three days after the menstrual flow has ceased. The shaded part represents the renewed mucous membrane.

Besides the formation of a layer of columnar epithelium on the surface, other very marked changes had taken place in this uterus during the three days which had elapsed since the cessation of the flow. The muscular cells in the lower part of the body in the first and second members of the group reached the surface; in this uterus they did not reach the surface, but imposed on them was a layer of soft tissue, composed of round and fusiform cells, short straight rods, and glands imbedded in a structureless matrix. The glands which opened on the surface of the uterus were not very numerous, though immediately below the surface glands were found in great abundance. The orifices of the latter I could not trace.

They were lined by columnar cells, which measured from $\frac{1}{4000}$ inch to $\frac{1}{2500}$ inch in length (Plate I. Fig. 2). In the layer in which these glands lay there were no groups of round cells similar to those found in the first two uteri. The glands situated near the surface were most developed. The lumen of those, however, was not always larger than that of those situated deeper in the wall, but the columnar cells lining the latter were larger than those lining the former, so that by beginning at the surface and examining successive layers, each situated deeper in the uterine wall than its predecessor, we first met with sections of glands lined by well-formed columnar epithelium, next by sections lined by smaller columnar cells, next with sections lined by columnar cells, appearing under a low power as nuclei. These cells were arranged around a lumen, their extremities being directed

inwards towards the centre, and outward towards the circumference. Indeed, they formed the outer extremities of the radii of a circle. Deeper still than these collections of nuclei-like cells were found small round cells arranged around circular or oval openings ; and deeper still, groups of round cells having no distinct arrangement.

These various groups of cells, representing different stages of development, might have been portions of the same gland cut across at different depths from the surface, or they might have been different glands in progressive stages of growth. The former view is, I think, the more probable, for in some instances I have been able to trace glands for a considerable depth into the muscular wall, and have found them terminate in the above-mentioned groups of round cells.

The glands ran obliquely near the surface, some ran parallel with it, few or none assumed a direction perpendicular to it, so that in a longitudinal section perpendicular to the surface of the uterus the sections of the glands appeared as long ovals ; deeper, however, the sections of the glands became less oval and more circular, showing that in that situation the glands ran transversely. The tissue in which the glands were embedded was composed at the surface of small round cells, fusiform cells, and short rods lying in a transparent structureless matrix. A little below the surface the round and fusiform cells became fewer, and short fibres were found among them, which increased in number until the well-marked muscular fibre cells were reached ; so that from the surface to the muscular layer there was a gradual transition from round and fusiform cells, through short fibre cells, to well-marked muscular tissue. In the latter no glands could be found. The arrangement of the fusiform cells was peculiar : whilst the round cells were irregularly scattered through the tissue, the fusiform cells were arranged in bundles like the muscular fibre cells of the uterus. The renovation of tissue began at the inner orifice, and proceeded towards the fundus. The muscular tissue in the neighbourhood of the inner orifice in the first two uteri contained glands, but in this uterus it appeared to be devoid of them, though groups of round cells were found in that situation in con-

siderable abundance. Nearer the fundus in this uterus, glands lined with columnar epithelium were found to extend for some depth into the muscular wall, showing that the muscular and connective tissue of the uterus, by the proliferation which they undergo, become changed into the soft tissue composing the uterine mucous membrane. At this period there was no line of distinction between the fusiform cells and the muscular fibres in any part of the uterus, but a gradual transition from one to the other; nor was there a line of distinction between the glands lined with well-formed columnar epithelium and the groups of round cells found in the meshes of the muscular bundles, but a gradual transition through smaller cells, groups of round cells arranged around a lumen to masses of irregularly arranged round cells.

The mode of renewal of the columnar epithelium lining the cavity of the uterus is not easily made out. In the lower part of this uterus it formed a continuous layer, but at the upper part and at the fundus it was wanting. The cells entering into its formation were smaller than those forming the lining of the fully developed gland: on the other hand, they were of the same size as those lining the upper part of the cervix. This makes it probable that the lining of the body was renewed by extension from that of the cervix; it is possible, however, that the epithelium of the glands also contributed to its formation. On this point my observations throw no light.

4. The fourth uterus was that of a woman, aged twenty-nine years, who had died of acute pneumonia. The menstrual flow began on the third of the month, ceased on the sixth, and death took place on the twelfth—six days after the cessation of the discharge. The uterus and its appendages were much congested, the veins being distended with dark blood. The mucous membrane of the lips around the *os tincae* was wanting; that of the cervix was normal; that of the body was very thin (measured about one line at its thickest part) and congested. The congestion was most marked at the fundus. The cavity contained a little blood-stained mucus.

On microscopical examination it was seen that the mucous membrane had been renewed throughout the entire extent of

the body of the uterus. It was thin in the neighbourhood of the inner orifice, gradually increased in thickness to a point midway between the isthmus and fundus, and then became gradually thinner as it approached the latter situation, where it measured about $\frac{1}{35}$ inch in thickness. It was everywhere much congested ; numerous small hemorrhages had occurred in its superficial layer, and its vessels could be seen greatly distended and engorged with blood. The glands were in great part deprived of their epithelium, and only in the deeper layer of the tissue, close to and in the muscular wall, could traces of columnar epithelium be found. Though no traces of the epithelial lining of the uterus could be discovered, yet there can, I think, be no doubt that it had been renewed throughout the cavity, and that it had been removed, together with the epithelium of the gland, by the congestion of, and the consequent hemorrhage into, the mucous membrane. The structure of the membrane was similar to that of the mucous membrane of the uterus last described, with the exception that the round cells and fusiform cells entering into its formation were somewhat larger than those found in the latter.

FIG. 3.



Uterus a week after menstrual flow has ceased. Shaded portion represents renewed mucous membrane.

At the fundus, where the congestion was most intense, a tolerably marked distinction was observed between the mucous membrane and the muscular wall ; but elsewhere throughout the cavity a gradual transition from fusiform cells to muscular fibre cells, similar to that already described.

5. The fifth uterus was that of a woman whose history could not be obtained. She was thirty-five years of age, and had had one child. She had thrown herself out of a window, and had died from the injuries caused by the fall. It was found on examination that the liver had been ruptured, and that the abdominal and pelvic cavities contained a large

quantity of blood. The uterus was pale. The left ovary contained a collapsed sac, on the most prominent part of which was a small opening, which led into a cavity the size of a large pea. This cavity contained no blood, but at the base of the follicle, underneath its lining membrane, there was a layer of effused blood. The surface of the sac was slightly injected. There can be no doubt that this sac was a Graafian follicle. It was developed and almost matured when death took place ; and it is not impossible that before the time for its natural rupture had arrived, it was artificially ruptured by the concussion of the woman's fall.

The surface of the cavity of the body of the uterus was of a slightly yellowish colour. It was soft and smooth, and dotted over with innumerable little white points. No vessels could be detected on its surface or in a section of it. The thickness of the mucous membrane varied. Near the internal orifice it was thin ; it became thicker towards the fundus and over the upper third of the anterior and posterior walls, and at the fundus the thickness reached its maximum. The membrane was very thin on the borders of the uterus, and it became gradually thinner towards the orifices of the Fallopian tubes. The whole of the surface was covered by columnar epithelium.

A section showed that the membrane was composed of numberless glands, appearing as white *striae*, embedded in a semi-transparent matrix. In the lower third of the body the glands ran obliquely towards the surface (Plate I. Fig. 3). About the junction of the lower with the middle third, they assumed a more or less perpendicular direction, and this was maintained as far as the middle of the upper third. At this point they began to run a peculiar course ; the superficial part, or that next the orifice of the gland, ran perpendicularly to the surface, and the deep portion was bent abruptly upwards, and ran obliquely towards the fundus, where the perpendicular direction was again assumed.

In this uterus numerous glands opened into the cavity, and their orifices stood on a level with the surrounding surface. This is, I think, a point of some importance in

determining the position of this uterus in the series. Near the cervix, and in the lower part of the body, there was a marked distinction between the mucous membrane at its attached surface and the subjacent muscular tissue ; and in this situation no glands could be found extending into the muscular layer. Nearer the fundus, however, there was no such distinction, and glands penetrated for a considerable distance into the muscular wall.

On comparing this uterus with the third member of the series, it was observed that though the structure of the mucous membrane was similar, there was a very marked difference in the degree of development it had attained in the two organs ; for the uterus now described was lined throughout by mucous membrane of considerable thickness, which had everywhere a covering of columnar epithelium ; whereas the third uterus was only in part lined by mucous membrane, and to the same extent by epithelium ; the glands also in the former were longer and more developed, their lining epithelium being larger than in the latter. Further, there was in the neighbourhood of the inner orifice a marked and abrupt line of distinction between the mucous membrane and the muscular wall in the fifth uterus of the series ; whereas in the third there was no such distinction anywhere, but a gradual transition from one to the other.

On comparing the same uterus with its immediate predecessor—the fourth of the group—it was found that the mucous membrane of the fifth was thicker everywhere than that of the fourth, and that in the former a line of distinction existed between the mucous membrane and the muscular wall in the neighbourhood of the cervix ; a condition which was not present in the latter, except at the fundus, where the congestion was most intense. The evidence from the state of development of the glands was not available in this comparison, because in the fourth uterus they were almost completely destroyed.

It seems to me that the facts just stated are sufficient to prove that the mucous membrane of the fifth uterus of the series was in a higher state of development than that of

either the third or the fourth ; and that, consequently, a longer time had elapsed since menstruation had taken place in the former uterus than had passed since its occurrence in the two latter.

(*To be continued.*)

METRO-CEREBRAL DISEASE.

By PERCY BOULTON, M.D., &c.,

Physician to the Samaritan Hospital for Women and Children.

HE is the best physician who interprets symptoms correctly, and refers them to their proper place, while he who blindly treats them is certain to err. Reflex diseases are, perhaps, numerically equal to all other complaints that flesh is heir to, and consequently the physician's powers of reflection should be equally great.

Many symptomatic diseases are described in our text books, but there is scarcely an organ in the body that cannot and does not react on each and all of the other organs at times, presenting a variety of combinations which contrast with the various salts in the inorganic kingdom, which are as numerous as the sum of any and every acid in combination with any and every base. It is well known how the stomach will war against the brain, and *vice versa*, and it is often a nice point to decide whether vomiting is cerebral or gastric in origin. In the same way we find cardiac disturbance, or asthmatic suffering and other troubles, through this unruly member.

To come nearer, however, to the point at which I am aiming, it is not surprising that an organ like the womb, which has a very short and active career, and which, during its reign, holds a ruling sway over woman, should assert itself in a multitude of ways. This was known 1900 years ago, and though Celsus, who was a representative man in his day, does not say anything about reflex disorders (which was left for Marshall Hall to describe), he says :—

“Ex vulva quoque feminis vehemens malum nascitur, proximeque ab stomacho vel afficitur hæc, vel corpus afficit.

“Interdum etiam sic exanimat ut tanquam comitiali morbo prosternat.”

In short, he declares that next to the stomach the womb affects the body, or is affected, and that hysterical fits are a result.

Celsus had neither speculum nor sound, and he proves himself a clever interpreter of symptoms.

It is only in our own day that gynecology has become a great study in itself, and as a rule our students have hitherto had no opportunity of learning *practically* much about it, for patients object to being examined by them, and consequently this field is to a great extent looked upon as special ; and it is scarcely understood by the bulk of general practitioners that in a reflex way this organ may be a source of many diseases, and that the irritation of ovulation is a frequent cause of epilepsy and insanity. The sickness of pregnancy is an allowed fact, but madness, except when puerperal, is rarely thought to be of uterine origin.

In turning over a few pages of my note book I am reminded of patients, many of whom have had their symptoms treated often and long by the family doctor without any result, simply because the real cause was not recognised. Without attempting a complete list of such cases, I will name a few of the reflex disorders I have met with.

Cerebral . . . Periodic headaches, neuralgia, depression
of spirits, hysteria, epilepsy, melan-
cholia, &c.

Pulmonic . . . Phthisis.

Cardiac . . . Irritation.

Gastric . . . Dyspepsia, sickness, flatulence, &c.

Intestinal . . . Constipation, diarrhea, &c.

Vesical . . . Enuresis, irritation,

to say nothing of diseases of the uterus or ovaries.

Many of these cases would answer my purpose to describe as typical.

Miss D., whose melancholia was due to retroflexion, and who got speedily well after replacement of the organ.

Miss F., whose epilepsy arose from a similar cause, and was as readily relieved ; or,

Mrs. S. J., whose case I will give *in extenso* :—

This lady was aged thirty-nine years, and had for nine months previous to coming to me been under the constant care of a West-end general practitioner, associated with an eminent psychologist, but without any improvement. She had been married twenty-one years, and had had seven children and one miscarriage.

Whilst naturally of a gloomy temperament, she had only become melancholic since her last confinement. When I first saw her she presented a careworn expression, and had the usual dejected and utterly miserable appearance characteristic of these cases. She said she “had no proper love for either her husband or children, and that her thoughts were awful.” Religious subjects were so painful to her that she could not bear even to hear the church bells, and she would not open a book, because everything she read seemed to convince her more than ever of her lost condition ; so she sat most of the day with her hands crossed, moaning and groaning. I could find no disease till I made a vaginal examination, which I was told had not been done by her previous doctors.

Her uterus was large, ulcerated, and subinvolved, and pouring out quantities of “white of egg” discharge.

This was undoubtedly the root of the mischief. The lady, naturally depressed, and after several confinements, had become anemic, and lost nerve power, and an exhausting discharge, together with nerve irritation, sufficed to unhinge her brain.

Sleeplessness was a prominent feature, and an interesting one, as it bore out the current view of physiologists that sleep is due to anemia of the brain.

From loss of vaso-motor nerve power when the patient became prone, the blood gravitated into the cerebral vessels, producing hyperemia, and consequent wakefulness ; but when erect, there was uncontrollable desire to sleep from anemia.

As my patient was 5ft. 6in., and only weighed 9st. 4lbs., I put her on cod-liver oil and bark, procured sleep by

chloral, regulated her diet, giving a fair amount of stimulant, ordered a shower bath on rising, a walk every morning, and a drive every afternoon, weather permitting. I procured an excellent female attendant, who was responsible for the proper carrying out of all instructions, and I commenced a course of applications to the uterus for the cure of the local mischief, which was the immediate cause of irritation.

In two months my patient had gained 11 lbs. in weight, and as her uterus got healthy her mental condition improved, and in four months she was perfectly well in every respect, and more cheerful than she had been for years, and she remains so up to the present time.

Exhausting discharge may as easily set up phthisis as melancholia in a patient with stronger nerves but a weaker chest. So do circumstances alter cases. The inference is that vaginal examination should be made in many of the diseases of married women, and should not be neglected in the unmarried if the ovarian nismus distinctly aggravates the morbid symptoms; but without a knowledge of uterine pathology many cases must occur in general practice which go uncured and remain a mystery to the end.

THE INFANTILE UTERUS.

By W. C. GRIGG, M.D.

Physician to Queen Charlotte's Hospital, and Assistant Obstetric Physician to the Westminster Hospital.

THE abnormalities of the uterus and its appendages have of late years attracted much attention, from their influence on child-bearing, ovulation, and menstruation. As long as the yearning for offspring exists in the human breast, and barrenness is viewed by women themselves as a disgrace, so long will and must the causes of sterility actively engage the attention of medical practitioners. With our daily increasing pathological and physiological knowledge, the causes of infecundity are becoming gradually understood, and the limits of remedial measures more defined. Amongst the many sources of sterility, some congenital defects in the generative organs take no mean part; in this present paper I will only treat

of that variety commonly known by the name of "infantile uterus;" a not infrequent causation of unfruitfulness in woman. There are three separate distinct forms, two of which are congenital—the one curable, the other incurable; the third super-induced, a sequence of parturition at an early age. The latter variety was first recognised and described by Sir James Simpson, who applied to it the name of superinvolution of the uterus; the restorative action of the uterus being carried, as he thought, to an excess. Its true pathology remains yet to be made out. The atrophy is not confined to the uterus, but embraces the ovaries as well. In Sir James Simpson's case, the tissue of the ovaries was found dense and fibrous, with a complete absence of Graafian vesicles. As far as I have been able to discover, it has been only observed in females who have borne a child under the age of nineteen years. I have never yet met with a case, but judging from medical literature it is not a very uncommon accident. All authors agree in regarding the sterility arising therefrom to be incurable. The uterus degenerates into a dense fibrous structure. The amenorrhea, which always accompanies it, is equally irremediable. Of the two congenital forms, I will treat first of all of that in which the barrenness is incurable.

It is a very rare affection, and arises from some disturbance in the continuous development of the uterus and its appendages. The external genital organs are generally perfect; but at times the *mammae* and the usual female characteristics are wanting, the persons resembling men in their features, growth of hair, and voice. The uterus preserves its true infantile proportions, the body being very small, the cervix long, varying from one to two inches in length. The walls are exceedingly thin; the infra-vaginal portion of the cervix is rudimentary. The canal is readily permeable and sometimes wide, the internal os particularly so. The Fallopian tubes have always been found well developed, but the ovaries are generally small, with or without Graafian vesicles. The vagina is generally normal; menstruation is either absent or seldom, scanty, irregular, and more or less painful. The sterility is incurable; for should

the uterus become pregnant the organ is incapable of any considerable growth ; the ovum is consequently either expelled per vaginam, or, through rupture of the uterine walls, into the peritoneal cavity. The true pathology of this condition has not yet been made out. Whether any, or if any, which constituent of the uterine parenchyma is defective would be extremely interesting to know. In a case that I lately met with, Dr. Allchin is kindly making a careful microscopical examination, and comparing sections taken from it with those from uteri of persons of a similar age. I regret not to be able now to publish the result of his investigations ; I trust, however, at a future date to be able to do so. The person from whom the preparation was obtained was a girl aged just twelve years. She was admitted into the Victoria Hospital for Children, Chelsea, with obscure head symptoms, and died within a week of admission. She was tall for her age and well formed. Had suffered from Hydrocephalus as an infant. The head was large and of the usual hydrocephalic shape. The post-mortem examination revealed widely-disseminated tubercle through most of the internal organs. The form of hydrocephalus was the internal one, with a considerable expansion of the ventricles. The external genital organs were perfect, the hymen however absent. The vagina was unusually wide and large for a girl of her age, easily admitting of three fingers. It had all the appearance of frequent sexual intercourse. The Fallopian tubes were normal, the ovaries a fair size, with perfect Graafian vesicles, but the uterus was so small, and its walls so thin, that it could only with difficulty be felt between the layers of peritoneum, and the infra-vaginal portion was a mere rudiment ; A No. 5 catheter could however be passed up the cervical canal. The length of the cervix was half an inch, the body barely one-eighth of an inch. The internal os was wide. The uterine walls were only slightly thicker than the vaginal. Its weight about a drachm, rather less than more.

I made some careful examinations of the uteri of still-born children, and found they measured full three-quarters of an inch in length, and weighed about a drachm and a half, and their walls were of considerable thickness. The normal size

of a uterus of a girl aged twelve should be seven-eighths of an inch in length, and about two drachms or more in weight.

The uterus does not increase much in size from the age of four years until after puberty, and menstruation has been well established. In one case that I had an opportunity of measuring, in a girl thirteen years old, I found a sound passed one and a half inches. Dr. Charles Squarey, when he examined the above preparation, of which I have given an outline, informed me he had a few days previously met with an exactly similar specimen in a girl about the same age, who had had chronic hydrocephalus, and had died rather suddenly of tuberculosis. It is difficult to trace any connexion between the constitutional affection and this form of abnormality, as in phthisis there is usually a premature development of the genital apparatus: nor do I believe in any, but regard it merely as a coincidence. In Sir James Simpson's case of super-involution, tubercle was found pervading several of the internal organs. In other cases I find no record of the constitutional condition given.

The last and most common variety of infantile uterus, sometimes called "*uterus parvus*," from its being small throughout, arises occasionally from constitutional causes, but not as a rule. In a case lately seen there was a distinct history of hereditary syphilis; but in the majority of cases no distinct reason can be assigned for its origin. Not infrequently the subjects of this affection are remarkably well grown and well developed women, which makes the peculiarity all the more striking. It is a defective growth of the whole of the internal genital apparatus, not a defective development. The vagina, uterus, and appendages are universally small. The infantile form of the uterus, however, is not retained, the uterus is pyriform in shape, and of a similar configuration with the normal uterus. The usual proportion between the various parts is accurately maintained; not as in the former variety an arrest of the body with an elongation of the cervix. Its position is generally normal; but in two cases I found it acutely retroflexed. It differs, in fact, only in its bulk. Amenorrhœa is frequently present; when menstruation exists it is irregular,

scanty, and occasionally painful. Impregnation may occur and gestation proceed to the full term. The treatment should be based on a plan of gentle stimulation of the uterus. When the deviation from the normal is excessive, the attendant amenorrhea is not generally cured by emmenagogues, electricity, or the galvanic stem pessaries. If the deviation is, however, but slight, medications are more successful in curing the amenorrhea, and in increasing the scanty flow to the normal amount. It sometimes happens that with menstruation a universal and vigorous growth of the uterus is observed. I have found a fortnightly introduction of graduated bougies have a very beneficial effect in stimulating the organ and increasing the menstrual flow. Unfortunately I am not in a position to say whether the good effect has been permanent or whether impregnation has ensued. I have also employed the rapid dilator with equally good results. Persistent and frequent headaches are a very common accompaniment of this affection. The introduction of bougies and the application of the rapid dilator has invariably afforded great relief, if it has not succeeded entirely in curing this distressing symptom. I am not aware of sea-tangle, or sponge tents, being employed as a method of treatment in this malady. There is always some danger of septicemia arising through the use of tents, which requires considerable consideration before resorting to their employment.

Sexual intercourse, except when impregnation takes place soon after marriage, is frequently a source of great discomfort and unhappiness, as from the shortness of the vagina, it is apt to become very painful. Occasionally vaginismus ensues, and sometimes pelvic cellulitis is set up. In more than one instance have I seen this occur.

The differential diagnosis of the three affections is not difficult, and is made by means of vaginal and rectal examinations, measurement of the uterus by the uterine sound, or by passing a catheter into the bladder at the same time the forefinger is introduced per rectum. In the second variety, that in which the true infantile form of the uterus is maintained, the tubular shape of the organ and the extreme thinness of the walls are the chief guides, which is best made out by pushing

the uterus backwards with an introduced sound, whilst the left forefinger is passed into the rectum. The pyriform shape of the small uterus (*uterus parvus*), which is so exceedingly diagnostic of the affection, may be recognised by the same method. It is of considerable practical importance accurately to differentiate these three affections, as in two the sterility and amenorrhea are incurable; in one only is treatment likely to afford relief, and that more especially when the deviation from the normal is of lesser degree. Much annoyance and disappointment are thereby saved both to patient and practitioner. There are still many very interesting points which remain to be discussed, but the scope of this paper will not permit it.

Reports of Hospital Practice.

BRITISH LYING-IN HOSPITAL.

COMPLETE RUPTURE OF THE PERINEUM.

Operation—Recovery.

By ARTHUR W. EDIS, M.D.

Physician to the British Lying-in Hospital.

A. C., aged twenty-six, married, delivered of her second child on November 27th, 1874. Owing to the large size of the child, which weighed 10 lbs. 12 ozs., and the sudden movement of the patient during the final throes of labour, the perineum was ruptured extensively at 3 A.M. Agreeably to previous instruction when such cases occurred, a note was sent on at 9 A.M., informing me of the fact, and on my arrival at 10 A.M., I found, on examination, that the perineum was ruptured through the sphincter ani, and involving the recto-vaginal septum for at least $1\frac{1}{2}$ in. to 2 in., the vagina and rectum having one common outlet. Having explained to the patient the advantage of attempting an operation for her relief at once, she willingly consented. She

was placed in the semi-prone position, lying on her left side with the left arm out behind. The hips well over the edge of the bed, and the head to the opposite side of the bed. The bowels having acted freely at the time of labour, no enema was given. The edges of the wound were carefully sponged, and without the aid of chloroform or other anesthetic, a silver suture was passed with an ordinary curved needle through the recto-vaginal septum, and brought out posteriorly; four other sutures served to approximate the edges very exactly, the whole operation lasting some twenty minutes. No bandage round the knees was applied. The bowels were relieved regularly every day by means of castor oil, if they did not act naturally. On December 7th, ten days after the operation, the five silver sutures were removed, and the perineum was found to have healed up almost entirely, the only surface that had not adhered being a small space superficially where the perineum had been torn in her first confinement, the tissues being cicatricial.

The bowels were carefully regulated during the following ten days, when the patient left the hospital convalescent. A subsequent examination showed that the union was most satisfactory and complete.

Remarks.—The above case illustrates the advantage of operating at once, even in severe rupture. Sufficient time was allowed to enable the patient to recover from the shock of parturition, and by this means a good light—daylight—insured.

The deep sutures were brought out per anum, a great advantage at the time of removal; the bowels were opened regularly, not confined as generally advised. No ligature or bandage was placed round the knees, but simply care in moving in bed required, a matter of much consideration as regards the patient's comfort. No anesthetic was administered, the pain in these cases being really very trifling, the irritation serving to increase the contraction of the uterus, the risk of its relaxing being materially lessened by abstaining from the employment of chloroform.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

FEBRUARY, 1875.

OBSTETRICO-LEGAL PROCEEDINGS IN WARWICKSHIRE.

TWO cases have lately occurred in the County of Warwick of very great interest to all who are engaged in Obstetric practice. The first is one of rupture of the vagina, with protrusion of the intestines. The history of it is briefly as follows :—Ann Woodward, a labourer's wife, was attended in her eleventh confinement by Mr. E. Peacock, of Chilvers Coton. When the labour was over some of the intestines were found protruding through a rent in the vagina, and these Mr. Peacock severed, and placed in a chamber utensil, and afterwards deposited in a privy at the rear of the house. The patient died two hours after the operation. By direction of the Coroner, a post-mortem examination was made, when it was discovered that there was an opening through the upper and posterior part of the vagina, into the peritoneal cavity, sufficiently large to admit the hand ; and that portions of the large and small intestines (fifteen feet in length) and mesentery were missing. At the inquest Dr. Barnes, and other eminent medical witnesses, gave evidence in favour of Mr. Peacock ; and the Coroner, after hearing it, said that there was no evidence of "gross ignorance, want of skill, or gross inattention ;" and the jury returned this verdict : "That the deceased died from the effect of an escape of intestine, consequent upon spontaneous rupture of the vagina during her confinement." The history of the case does not, however, terminate here ; for an application was afterwards made, on behalf of the husband of deceased, for a summons against Mr. Peacock on the charge of manslaughter, and the

summons was granted. The case came on for hearing at Atherstone, on the 29th of July, the prosecution being conducted by the Crown; and again at Nuneaton on the 9th of October, when, after hearing much medical evidence, which differed materially from that given at the inquest, the defendant was committed for trial at the Warwick Assizes, bail being accepted for his appearance—himself in 500*l.*, and two sureties in 250*l.* each. It is not desirable at present to do more than simply state the main facts of this remarkable and most distressing case. The final inquiry will take place next month, and the evidence and verdict then given will be anxiously awaited, and widely criticised. One effect such cases as this ought to have upon medical teaching and licensing bodies. It should not fail to make clear to them that the branch of the profession in which such an accident may happen, ought not to be lightly considered or slightly provided for; and that an extension of the course of instruction, given to and demanded from those who intend to practise midwifery, cannot conscientiously be delayed.

The second case is that of Catherine Johnson, aged twenty-four, the wife of a watchmaker at Coventry. She was confined on the 24th of December, and attended by a midwife, Elizabeth Ingram. On the 8th of January the patient died of puerperal fever, and an inquest was held upon her body. From the evidence then given the following history may be gathered. Mrs. Ingram, who during the last seventeen or eighteen years, has delivered a "great many" women, and for the last two years has acted as midwife to the Ladies' Charity, has been very unfortunate in meeting in her practice with several cases of puerperal fever, some of which have proved fatal. The Coroner's attention having been directed to this he sent Inspector Elms to tell her that "if she attended any other case of confinement for two months, she would be held responsible for the consequences." This caution was delivered on December 18th, and was repeated to her in substance by resident medical men. Soon after the Coroner held an inquest on the body of Sarah Chapman, who died of puerperal fever on December 28th, and was attended by Mrs. Ingram. The case was, however, dismissed,

because the midwife had commenced attending the deceased before she received the Coroner's notices. She was nevertheless censured, and told not to practise again until two medical men certified that she might do so. In defiance of this second warning, Mrs. Ingram again appeared in the lying-in room ; and, in the absence of Dr. Millerchip, performed the necessary acts for the poor woman upon whose body the present inquest sat. In defence, Mrs. Ingram alleged that Dr. Millerchip said she might be present ; but this improbable extenuating pretext was not accepted by the jury, who returned a verdict of manslaughter against Mrs. Ingram, and she was accordingly committed for trial at the next Warwick assizes. She was released on bail, herself in 100*l.*, and two sureties in 50*l.* each. There are several points of interest in this case. First, the question as to the contagiousness of puerperal fever, the reality of which some individuals might perhaps be found to dispute ; second, the legal right of a coroner to step in and warn an obstetrician not to attend women in labour ; and thirdly, does not it again demonstrate the necessity of instructing midwives ? Mrs. Ingram's attainments are sufficiently manifested in her answer to the Coroner, who asked her if she knew what child-bed fever was ? " I never met with it, and did not even know until Dr. Brown told me. I never had a woman done badly in my life before—never." It is to be hoped that the British Medical and Social Science Associations, and the Obstetrical Society of London, will continue their exertions, and endeavour to obtain from the present Government the favourable consideration and promise of co-operation which they had succeeded in obtaining from the late Administration. The position of this country with regard to the instruction of midwives and the regulation of their practice is, when compared with the rest of Europe, disgraceful and humiliating. It can only be by a comprehensive parliamentary enactment that this class of women can be converted into safe and useful public servants.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, January 6th, 1875.

E. J. TILT, M.D., *President, in the Chair.*

The following Gentlemen were elected Fellows of the Society :—

Alex. Hampton Brewer, M.R.C.S. ; Angus Frazer, M.D. (Aberdeen) ; William Owen, M.R.C.S. (Ebbw Vale) ; and Walter Alfred Satchell, M.R.C.P. Ed., Kew.

Case of Hydatiform Mole.

(Exhibited by Dr. JOHN WILLIAMS.)

C. D., aged thirty, married two years ; never pregnant before ; suffered from dysmenorrhea previous to marriage ; has passed clots since, at the periods ; last catamenia June 28th, 1874 ; morning sickness ensued, and occasional sickness after food. During August she nursed an invalid, frequently exerting herself in lifting the patient, especially on the 17th, after which the sickness became worse and the feet and ankles swelled, the edema gradually extending upwards to the lower abdomen and labia, which were enormously swollen. There was no edema of face or lower limbs. The abdomen was symmetrically enlarged ; a tumour having the character of the distended uterus was felt, soft and elastic, but not fluctuating ; no fetal heart sounds were audible, but a placental bruit was once heard, a little below and to the left of the umbilicus.

Per vaginam the tumour could be felt filling the pelvis, the os uteri high up and tilted forwards close to the pubis, not characteristic of pregnancy. The tumour was softish, as if it contained fluid, and a small triangular swelling filled the hollow of the sacrum. Taken together they had the characters of a retroverted gravid uterus. The breasts were enlarged, and the *areolæ* darker than usual, but not characteristic of pregnancy. On the night of November 10th she was taken in labour, and was delivered the following morning of an hydatid mole, which consisted of a ruptured bag, having the shape of the uterus, containing the vesicles forming the mole. The bag was evidently formed by the decidua, and was about one-quarter of an inch in thickness. At one part it was thick and fleshy, though a section of it presented many cysts. This thickened fibrin was doubtless the imperfectly-formed placenta. Slight hemorrhage occurred once some days before the onset of labour, and severe hemorrhage at the time of labour, due to *placenta prævia*. The case is unusually interesting, as the decidua was expelled almost in its entirety, and thus the mode of attachment of the vesicles to that

structure was shown. They were arranged like beads on a string, which string was attached to the inner surface of the decidua. This fact favours the view that the hydatidiform moles were formed by degeneration of the chorion villi, and in this case the degeneration commenced probably soon after the formation of the placenta had begun.

Dr. ROUTH inquired if there had been any alternation of a watery and sanguineous discharge; to which Dr. Williams replied that there had been no discharge of blood at all till the patient came to the hospital.

Ascitic Fetus.

Dr. J. ASHBURTON THOMPSON exhibited a specimen of this. The head presented, and as the labour was tedious, the forceps were applied and the head delivered, but, as was subsequently found, at the expense of the tissues of the neck. The arms were brought down, but still delivery could not be completed. Whilst absent with the view to obtaining the assistance of his partner, Dr. Brunton, two immoderately forcible pains served to eject the fetus.

There were two points of interest in the case. One was the frequency with which little expulsive power existed when the uterus was over-distended; and 2nd, That the pressure from above diminished the circumference of the abdomen by forcing a part of the fluid into the thorax; but the traction exerting pressure in the contrary direction, increased the circumference by thoroughly extending the lower part of the abdomen, even preventing the whole of that cavity from being utilized in spreading out the fluid.

Dr. BARNES inquired whether the placenta was pale and friable; to which

Dr. THOMPSON replied that it was.

Dr. JOHN WILLIAMS suggested that the specimen should be examined, as it was not a common one, and was of much interest.

The PRESIDENT requested Dr. J. Williams and Dr. Hayes to examine it in conjunction with Dr. Thompson.

On the Prevention of Mammary Abscesses by the Application of the Principle of Rest.

Dr. W. BATHURST WOODMAN read a paper on this subject.

The Author had been struck with the rarity of mammary abscess in animals, notwithstanding the forced abstinence from suckling which cats and dogs undergo from the drowning of their progeny, and in spite of the great distension of the udders of cows, mares, and other animals when driven to market, or for other reasons separated from their young. Acting upon this suggestion, he carefully abstained from those manipulations and questionable "gentle" frictions which have so long been customary in such cases, and with the most satisfactory results. Where an abscess was threatening, in place of

employing liniments he enjoined perfect rest, the avoidance of all friction and rough handling, and of suckling for a time, if possible, from both breasts, but at all events from the one most implicated ; the horizontal position, careful application of strips of isinglass, soap, or lead plaster, or of an air cushion with a hole in its centre, or of bandages taking their purchase from the opposite shoulder. In addition to these measures he employed preparations of opium, belladonna, or chloroform, applied on compresses, or ice, moist warmth, and leeches ; the local congestion being also relieved by diaphoretics, diuretics, and aperients, belladonna, iodide of potassium, and sedatives being given if requisite. Illustrative cases of this method of treatment were given, exemplifying its advantages.

Dr. BARNES observed that the principle of rest had long been applied to the treatment of inflammation of the breast. He himself had learned the value of it from Trousseau, when a student in Paris thirty years ago. That admirable physician taught and illustrated it with great earnestness. He placed the breast at perfect rest by carrying straps of leather, spread with *emplâtre de vigo*, all round it, so as to lift it well up and exert constant support on the vessels. Thus edema was prevented and engorgement soon subsided. It must, however, be remarked that this form of pressure was ill borne in the first inflammatory stage. It was chiefly serviceable when suppuration had taken place and the abscess had been opened ; the sac was then rapidly closed. In the earlier stage he had seen leeches do excellent service : the pressure then must be tighter.

Dr. ASHBURTON THOMPSON said there were two modes of treatment not referred to in the paper,—the administration of tincture of aconite and total abstinence from fluids during the necessary number of days. By giving minim doses of aconite every hour, he had succeeded in cutting short inflammations of the breast which there was no doubt would otherwise have run on to suppuration, very frequently, indeed, in three cases out of four. In cases of still-birth he had hitherto found abstinence from fluids sufficient in every case to avoid every kind of mammary disturbance. Ice was allowed in moderate quantity, and no other fluid from the time of delivery until the fourth or fifth day, when the breasts generally returned to their normal state of quiescence. He had had two cases recently in which this method of treatment had been perfectly successful. The deprivation of fluid caused but little distress.

Dr. BRAXTON HICKS thought the principle of rest had been gradually coming upon us for years, friction only being resorted to among the poor and ill-educated. Surgery at the present day was all tending to quietude, manipulations only led to suppuration, and often produced the extra amount of stimulation required to set it up.

Dr. MURRAY observed that the application of a belladonna plaster was of great service, keeping the arm at the same time fastened to the side. In some instances a slight process of friction upwards was productive of good.

Dr. MATTHEWS, whilst heartily assenting to Dr. Woodman's views, thought that the public also had largely endorsed his practice, since he had observed that it was a very common proceeding to apply a large lead plaster (spread upon leather) to the breast in cases where it became necessary to get rid of the milk. This, of course, rendered friction and all meddling impossible. He had found that two large and soft handkerchiefs suitably applied, one by way of sling around the neck, under the breast, the other in exactly the reverse way, over the breast, and tied round the body, so as to include the breast between them, interposing a large pad of cotton wool, to constitute a very efficient mode of applying pressure.

Dr. EDIS remarked that the chief thing to be remembered was to limit the supplies, to act on the bowels, and to insure perfect rest to the *mammæ*. He was accustomed to order a belladonna plaster to be applied to the mammary region within twenty-four hours of delivery, thus exercising pressure as well as arresting the secretion of milk. Abstinence from fluids and great moderation in diet was enjoined for the first few days, an aperient mixture of mag. sulph. and pot. iod. being given twice or thrice daily to relieve the bowels. The shoulders should be raised, and the arms kept perfectly quiet, the upper part of the chest being only lightly covered, any friction or drawing of the breasts being strictly prohibited. Where this method had been adopted he had never seen a single instance of mammary abscess. An evaporating lotion continuously applied to the *mammæ* was in some instances sufficient to prevent the secretion of milk, but the pressure obtained from the plaster was of great service, and effectually prevented the employment of any friction.

Labour complicated by Pelvic Tumour, and by Convulsions.

Dr. HENRY M. MADGE brought forward the particulars of a case of this nature, similar in some respects to two other cases he had brought forward, which were recorded in the "Society's Transactions," vol. iv. p. 129, and vol. xiv. p. 227. The patient, aged twenty-four, short and stout, primipara, when nearly advanced to full time, slipped and fell forwards. Labour pains commenced next day. On examination the posterior wall of the vagina was pushed forward by a tumour about the size of a large orange, having apparently a smaller mass attached to it. It was hard, but yielding to the touch, non-fluctuating. The fetal head was arrested at the brim. Several ineffectual attempts were made to push the tumour above the brim. Turning was rejected, as the liquor amnii had escaped. Labour went on slowly for four days, when convulsions occurred. Chloroform was administered by Mr. Bailey, and the long forceps applied by Dr. Wells, but without avail. Craniotomy was then performed, and after considerable difficulty delivery was accomplished. The tumour, during the passage of the child's head and body, had become forced up above the pelvic brim, and could no longer be felt. It was probably a fibroid, attached

to the posterior surface of the uterus by a pedicle sufficiently long to enable it to drop into the pelvic cavity. The chloroform acted admirably in arresting the convulsions and keeping the patient quiet. There was no albumen in the urine. The patient made a good recovery.

Dr. MURRAY inquired if the tumour had been removed subsequently.

Dr. CUMBERBATCH asked what was the supposed therapeutic value of lemon juice in convulsions.

The Annual Meeting for the Election of Officers, &c., then commenced. Dr. George Roper and Dr. T. C. Hayes, the scrutineers of the ballot, declared that the list of names recommended by the Council had been unanimously approved of. The Treasurer's (Dr. Murray's) Report, which showed that the finances were in a flourishing condition, was read and adopted. The Report of the Honorary Librarian, Dr. Aveling, was also read and adopted. The President then delivered his annual address. Votes of thanks were accorded to the retiring officers. Dr. Hicks proposed, and Dr. Routh seconded, in most complimentary terms, a special vote of thanks to the retiring President, which was carried by acclamation.

PRESIDENT'S ADDRESS.

It is a time-honoured custom to begin an annual address by paying a passing tribute of respect to those who have been removed from the midst of us during the previous year. We have to deplore the death of fourteen fellows ; most of them threw themselves so earnestly into the engrossing cares of medical practice, that they had no time to make themselves known to fame, and of them this will account for my having little to say.

Edward Bousfield, of Thetford in Norfolk, studied at Queen's College, Birmingham ; he became a L.R.C.P. Edin. in 1866, and joined us in 1868. He settled at Thetford, was made Justice of the Peace, and died, much regretted, at the early age of 35.

Newton Lee, of Hornsey, studied at St. Bartholomew's, became a M.R.C.S. in 1857, and joined us in 1859. He died last January, aged 52.

Mathias David, of Pendre, Cardigan, was a L.R.C.P. Lond., and M.R.C.S. He joined us in 1871, and died last June, aged 52.

George Mendenhall, M.D., of Cincinnati, America, who joined us in 1872, and died last year, was a man of considerable note, for he gave an address before the American Medical Association at Washington in 1870, and I regret my inability to tell you more about him.

Edmund Snell, of Stepney, became M.R.C.S. in 1845, L.R.C.P. Edin. in 1859, and he joined us in 1869. He was in practice, at

Mile End, for twenty-seven years, and he died, aged 53, regretted by a host of friends.

Alfred James, of Forest Hill, became M.R.C.S. in 1859, M.D. St. Andrew's in 1862, and he joined us in 1868. He was Medical Officer of the Forest Hill Dispensary, and he died last August, aged 45.

Frederick Abercromby Hope Robson, of Iver, Bucks, studied at University College, became F.R.C.S. in 1869, M.D. of Brussels in 1867, and he joined us in 1868. Dr. Robson was a superior man; his connexion with the P. and O. Company induced him to settle at Shanghai, and he gained great credit for the pains he took in the defence of the town against the rebels. When his health gave way in China, he took a country practice at Iver; but a constitution once damaged by a tropical climate cannot cope with the weather changes that must be faced in country practice, and he died at the early age of 39, while actively engaged in all sorts of useful work.

Robert Ransom, of Cambridge, studied at University College, became F.R.C.S. in 1858, M.D. St. Andrew's in 1862, and he joined us in 1860. Dr. Ransom was a man of great local influence, one of those highly commendable men who, by becoming members of our town corporations, are able to persuade them to adopt sanitary improvements, which would have been otherwise indefinitely deferred. The best thing, however, to be said of him is, that hundreds of the poor lined the road to see their faithful friend passing to his last abode.

Herbert Robey Harris, of Bury, became M.R.C.S. in 1859, and joined us in 1861. He had previously served in Australia as Medical Government Officer at King George's Sound. He died last January of typhus, caught in discharge of duty, aged 42.

An officer knows that if he falls in battle, the country will give a pension to his wife and children. A medical man knows that if he falls fighting against infectious diseases, his country will leave his wife and children penniless. Such is the difference of the reward meted out to men, according as they elect to wear a red or a black coat.

Henry Digby Delamotte, of Swanage, was born at Holywell in Oxfordshire, in 1796; he studied at the Middlesex and at the Windmill Street Schools of Medicine. He took no degree, but joined us in 1861. He was long Admiralty Surgeon at Swanage, and a Poor Law Medical Officer for fifty years. Having had to tell you of the premature demise of so many men, it is perfectly refreshing to me, to be able to say that Mr. Delamotte had no reason to complain of his constitution. As for walking-stick and glasses, the comforts of old age, he never felt their want, and at the age of 77 he died suddenly, without ever having been ill, just as he was going upstairs to see a patient. His loss was felt as a public calamity, and it was said of him, "that no form was more familiar in the houses of the poor, or more welcome in the houses of the rich:" a most enviable epitaph for a medical man!

Charles Christopher Hayman, of Eastbourne, became M.R.C.S. in 1850, M.D. Aberdeen in 1853, and he joined us in 1859. He was in good practice in Kent in 1854, when hemoptysis caused the apex of the left lung to be found diseased. He, therefore, removed to Eastbourne, which re-established his health, a benefit he repaid by the active part he took in the sanitary improvements of the place. Forgetting that when once seriously damaged, a man is not fit for great work, he overtasked his strength, and Bright's disease came on some years ago, when he retired from practice, and he died last August, aged 48.

I now come to one whose pleasant face was often seen at our meetings. Thomas Ballard, of London, was educated at St. George's Hospital, became M.R.C.S. in 1843, M.D. of St. Andrew's in 1862, and he joined us in 1859. He has written on syphilis, and on the value of bleeding in apoplexy, and several works to show that "sucking when an infant can thereby get little or no food is a great source of disease to both child and mother." This singular notion did not prevent Dr. Ballard being a good practitioner; and he was so much respected that you placed him on your Council, that he was Vice-President of St. Andrew's Medical Graduates' Association, and President of the Harveian Society. The consoling lesson to learn from this is, that, provided a man's pathology be otherwise fair, and his professional conduct perfectly straightforward, he may ride a hobby with considerable vigour without losing the esteem and the respect of his fellow practitioners.

Frederick Bird, of London, was born in Colchester in 1818, became F.R.C.P. Edin. in 1841, and M.D. St. Andrew's in the same year. He was made M.R.C.P. in 1859, and joined us in that year. He was for many years Obstetrical Physician and Lecturer on Diseases of Women to the Royal Free Hospital, and afterwards to the Westminster Hospital. When he died, a marked presentment disappeared from the West-end streets; for you must remember the high raised coachman, towering above a silver-plated chariot, and inside the middle aged gentleman with refined features, dressed as for a party, always alone and sitting well in front with his hat off. What a contrast to the style and manner of his elder brother, Dr. Golding Bird, with his clerical dress and parsonic cast of features, and nevertheless both were eminent and successful men. Beneath a display so unusual in the 19th century, there was a man who besides the courage the fop has often shown on the field of battle, had a keen intellect, asserting itself chiefly in the precision and in the rapidity of his diagnosis of pelvic diseases, besides other qualities that make a very successful practitioner. Like most of the men who succeed in London practice, when F. Bird settled in town, in 1842, his energies were sharpened by the stings of poverty, and the following year, when only twenty-five years of age, he was bold enough, without having ever witnessed the operation, to perform his first case of

ovariotomy, and he remained the chief London operator till the opening of St. Mary's Hospital in 1852.

His operations were openly performed in presence of Blundell, Rigby, Benjamin, Phillips, Sir Charles Locock, and many men of less note, nevertheless the report spread that he concealed his unsuccessful cases. This originated in his refusal to give Dr. Robert Lee* the details of his thirteen cases of ovariotomy, when in 1850 that gentleman was preparing a paper on Ovariotomy for the Royal Medical and Chirurgical Society. It would have been doubtless more courteous to have done so, but surely a man may reserve the details of his cases for his own use, without incurring the charge of unfair dealing. Another reason which led to F. Bird's being thought to deal with his ovariotomy cases in an underhand manner was, that already in 1850 he had come to the three following conclusions:—1st. That to decide whether it was judicious to perform ovariotomy, it was sometimes necessary to make a small exploratory incision. 2nd. That this incision was comparatively innocuous. And 3rd. That these cases of exploratory incision should be excluded from ovariotomy statistics. These conclusions which F. Bird had arrived at twenty-five years ago, are substantially admitted now; but when in 1850, in the discussion† that followed the reading of Dr. Lee's paper, F. Bird came out with the statement, that besides the thirteen cases of ovariotomy to which he owned, he had often made exploratory incisions, the senior surgeons were loud in protesting that all incisions into the peritoneum should be counted as cases of ovariotomy, and that not to do so was to suppress cases. In the *Lancet*‡ of the following week, F. Bird published an outline of all his cases up to that time, and in accordance with the ruling of his critics, in that discussion, he included eighteen cases in which he had only made an exploratory incision, and he subsequently published some valuable papers§ on the Diagnosis, Pathology, and Treatment of Ovarian Tumours. This discussion and the concluding remark of Mr. Lawrence, that ovariotomy might soon be looked upon as an attack on the character of the profession, threw a damper on ovariotomists, and F. Bird no longer laid himself out for ovariotomy, although he occasionally operated, and for the last time in November, 1871. He lived to see the surgical audacity of Baker Brown, at St. Mary's Hospital, again draw attention to ovariotomy, and to see its recognition as a legitimate operation fully established at home and abroad by the cautious and scientific practice of Mr. Spencer Wells and Dr. Thomas Keith. I say abroad, for the Continent refused to accept the verdict of American surgery till it had been ratified by British surgeons. I maintain that F. Bird's conduct with regard to ovariotomy

* "An Analysis of 108 Cases of Ovariotomy," *Med. Chir. Transactions*, vol. xxxiv.

† *Lancet*, 1850. Vol. ii. p. 583.

‡ *Lancet*, 1850. Vol. ii. p. 592.

§ *Medical Times and Gazette*, 1843.

was perfectly honourable, and that he no more concealed his fatal cases than his successful ones ; but I regret that he shirked the trouble of recording his latter cases. Whether this was the result of overwork, idleness, or disgust at unfair treatment, he must still be blamed, for even when a man feels himself most unjustly accused, he has no right to wrap himself in contemptuous silence. The course he upholds or the science he cultivates is for a time identified with him, and he is bound to publish all he knows on contested points, trusting that the future will rectify contemporary injustice.

It seems that neither Frederick, nor Golding Bird, were strongly enough constituted for the mental and physical wear and tear of London work, for they both died comparatively young. In 1873 F. Bird had a succession of ill-defined ailments that were set down to gout ; he became more and more prostrate last year, although he rested now and then. He died last year of broncho-pneumonia, aged fifty-six.

It is with mingled feelings of pleasure and regret that I now bring to your recollection the memory of one, by all esteemed, and beloved by many of us. John Jones Phillips was a Welshman by family and birth, he was educated at Mill Hill School, matriculated in 1860, and was articled to Mr. Pye-Smith, who has had the great honour to see four of his pupils become physicians to Guy's Hospital.

Dr. Phillips passed an unusually brilliant examination for the licence of the Royal College of Physicians, became a member in 1868, and took the M.D. degree at the University of London. He was a gold medallist in Obstetrics, and it was to this branch of medicine that his studies and his practice were chiefly directed, although he had spared no pains to become well informed in the whole range of medicine. He was appointed demonstrator of anatomy to the school of Guy's, settled in practice in Finsbury Square, and in 1869 he was made assistant obstetric physician to Guy's. In the same year he succeeded Dr. Barnes as physician to the Eastern Division of the Royal Maternity Charity, the largest Obstetric institution in England. Shortly afterwards he became consulting obstetric physician to the Tower Hamlets Dispensary, and assistant-physician to the Hospital for Sick Children in Great Ormond Street. In all these onerous offices he worked with only too much zeal. He filled the office of Secretary to the Hunterian Society, and of the Obstetrical Society, and to the latter post he had been re-elected for a third year only a few days before his death. He contributed several valuable memoirs to our Transactions, and to the Transactions of Guy's Hospital. Amongst these may be mentioned the following :—"On the Natural History of Ovarian Disease, with Post-mortem Records of eighty-eight cases," 1867 ; "On Retroflexion of the Uterus as a Cause of Abortion," 1872 ; "On the Mortality after Obstetric Operations," 1871 ; "On Sudden Death from Syncope after Labour," 1873 ; "On the Treatment of Puerperal Convulsions without bleeding," 1873. He could with difficulty be prevented from writing a work on Diseases of Women,

and consoled himself by adding to his labours the joint editorship of the Guy's Hospital Reports.

While doing all this work he knew that ever since his student days he had an organic disease of the heart. His friends also knew it, and plied him with good advice, which was always courteously received, but with most gentle obstinacy he pursued the arduous course he had chalked out for himself. In the early summer of 1873 he received a more impressive warning in the shape of an attack of Aphasia, and to the surprise of those who were not in the secret, he went to Scotland for a few weeks, returning in October with scarcely impaired speech. Still increasing rather than diminishing his engagements, he had been for some time sleeping out of town, placing his nights' rest at the mercy of an patient. On his return home, in the morning of the 28th of January, he complained of headache and sickness, and, though he saw some patients in his house, was not able to go out. Symptoms of cerebral disturbance, which were significant enough, probably appeared less important to him, from their having passed off so readily a few months before; and, forbidding his servant to call in any of the friends, close at hand, who would have been eager to give what help could have been possible, he went early to bed, saying that he should be better after a night's rest.

When called next morning he was unconscious, and the colleagues who were soon around his bed found him in deep coma, with contracted pupils, stertorous breathing, and paralysed limbs. The old apex murmur was still audible, and there can be little doubt that embolism, or a fragile state of the arteries, had led to extensive cerebral hemorrhage, filling the ventricles and pressing on the medulla. He never regained consciousness, and died about three in the afternoon of the same day.

Such is an outline of the brief career of our lamented friend. Instead of vainly picturing to ourselves what he certainly would have become as a consulting man, let him be portrayed in our annals just as we have so often seen him in this room—the very model of a secretary. With great aptitude for business, he was never in a hurry, but always had his work well in hand; he was as judicious in council as in debate and a charming reader. With a due sense of the ridiculous, he knew how to stifle in its birth the wounding smile, so as to be ever courteous to all; and his features habitually bore that impress of earnestness and of unaffected kindness that are so prepossessing in the handsome and the young.

Having thus concluded the most important part of my task, I have only a few remarks to make on the present state of the Society.

To make up for our losses by death, resignation, and erasure, we have last year recruited 48 new fellows, and including our 27 honorary fellows, we now muster 657 strong. I am fairly entitled to congratulate the Society on its last year's work. The interest attending our discussions has been above the average, particularly when the

presentation of numerous specimens led to short and lively discussions, in which many took an impromptu part. I hope the remembrance of these spirited meetings will impress on all fellows the importance of forwarding specimens to our Secretaries, and by so doing our absent country fellows will take a most effective part in the work of the Society. The new volume of Transactions will reflect the good work of last year; it will also contain an index of our fifteen volumes, for which we have to thank Dr. Potter, and I am sure it is unnecessary for me to enlarge on the nature of the benefit he has thus conferred on the Society. With regard to our finances, your Treasurer is adding some 50*l.* to your invested capital, although we have been liberally spending upon our library, which should be gradually made complete in all that relates to Obstetrical and Gynecological literature.

Independently of our work as a Scientific Society, you know that we have been occasionally obliged by our metropolitan position to take the lead in questions relating to the welfare of Obstetric Medicine, and last year we were called upon to decide whether our laws permitted us to admit women to the Fellowship of the Society. Your almost unanimous decision that women were not admissible was one of great importance, for the Profession felt that although the question was tried on a technical point, your verdict really meant that women were not qualified by nature to make good midwifery practitioners; that they were unfit to bear the physical fatigues and the mental anxieties of Obstetrical practice at menstrual periods, and during pregnancy and puerperality, and that it was unfair to society, to encourage women to suppose, that they could ever fit themselves to assume responsibility in those formidable Obstetric emergencies which too often completely paralyse men of experience as midwifery practitioners.

The remembrance of your decision on this question may also remind you, that last year I explained to you that the lower classes of society were at the mercy of uneducated midwives, uncontrolled by aught else than the fear of a coroner's inquest. Last year Lord Aberdare and Mr. Stansfeld were in office; they favourably entertained the views repeatedly brought forward by the Society, and they were prepared to bring in a bill for the better education and registration of midwives, when a change of ministry convinced your Council that the question must be left in abeyance.

It was after mature deliberation that the Obstetrical Society of London determined to move in this matter; its original resolve has been sanctioned by successive Councils, and it will be for the new Council to decide whether it is not time to reopen the question with the present ministers.

Ours is the only civilized country that has left unregulated the midwifery of the humbler classes, and it is a disgrace to Obstetric Medicine that there should be no means of preventing an incompetent and drunken woman from assuming the name and the duties of a

midwife. There is every probability that our efforts in this direction would be favourably received by a Government that has no great measures to carry, and which seems bent on dealing earnestly with all questions relating to public health.

Gentlemen, I cannot vacate the chair without thanking you for the invariable courtesy you have shown me in the discharge of my duty ; and I likewise thank the numerous officers with whom you have associated me for having rendered easy and pleasant the duties of office. I am glad my place will be taken by one so well qualified as Dr. Priestly to preside over your meetings to further the interests and support the honour of the Obstetrical Society of London.

OBSTETRICAL SOCIETY OF EDINBURGH.

Meeting, July 8th, 1874.

DR. MATTHEWS DUNCAN, *in the Chair.*

Discussion on Dr. Macdonald's paper on the Nature and Treatment of Difficult Occipito-posterior Positions of the Head, which appeared at page 588 of the December Number of this Journal.

Dr. WILSON said, there were so many points for discussion in Dr. Macdonald's valuable paper that he felt a difficulty in knowing which to select. He agreed with Dr. M. that in a large proportion of cases the head enters the brim more in the transverse than in the oblique diameters. He believed that cases of left occipito-posterior presentation which did not undergo the anterior rotation, and which terminated unaided with the face forwards, judging from his experience, were by no means rare. He had seen a good many such. In most of these cases, he believed that the child was either small or the pelvis large and the pains powerful. A large number of instrumental cases arose from the head not having taken the turn, which might arise from a variety of causes—*e.g.*, a large head, a deep narrow pelvis, or from ossification of the coccyx, combined with insufficient expulsive power. He believed that laceration of the perineum occurred very frequently, independently of the use of instruments. He had seen laceration of the vagina occur when no instruments had been employed, the mucous membrane alone giving way, while the skin remained entire. He had seen no evil result from these lacerations, although one or two had annoyed him at the time a good deal, especially those when forceps had been used.

Dr. YOUNG remarked that he had seen many cases in which the mucous membrane of the vagina had been lacerated in *primiparæ*, especially when the patient was above thirty-five years of age, and more especially when forceps were used, and the head large. Sometimes primiparous patients were very easy. He had not adopted Dr. Macdonald's method of examining the lesions of the vagina, as he

considered such interference to be wrong, unless where the case was severe, and the formation of fistulous openings into rectum or bladder might be feared. After the termination of the labour he did not consider it right to introduce the hand, as the patient, above all things, required rest, unless any portion of the placenta or membrane were left in the uterus.

Dr. DUNCAN said that he experienced the same difficulty as Dr. Wilson ; so numerous were the points in the theory and treatment of head presentations as brought out by the paper read. Any one of them would be sufficient to occupy a whole night. As regards the practical remarks, he was at one with the writer, with one exception—namely, the introduction of the finger into the anus, for the purpose of catching the forehead above the supra-orbital process, and pressing the head downward and forward over the perineum. Such a practice he considered neither safe nor desirable. Its principal use was to enable us to ascertain the state and position of the head. It was often much easier to get the finger up to the glabella through the anus than through the vagina. In this way it was possible to obtain an exact diagnosis of the position of a child's head, the position of the anterior fontanelle, and the coronal suture. The propelling force might, however, be attained by pressing upon the forehead externally. In many cases they would find that the sacro-sciatic ligament was much distended. They could feel the child's forehead forcing back the ligament at the side of the coccyx. The forehead can be felt pressed down in this position. Sometimes one can effect delivery by pressure externally here with far greater power, because you can use the whole hand and not a single finger. By this means one avoids injuring the rectum, for recto-vaginal fistula has been produced by the finger in the rectum. He had seen a case in which the result had taken place, probably by such interference at the end of labour. The finger internally might be employed to find out the exact moment for catching the head externally, as by catching it at the proper time the interference might become more efficacious. Dr. Duncan was satisfied that laceration caused by the forceps was more dangerous than the common tearing of the perineum. Dangerous injuries sometimes took place in the region of the *nymphæ*, in the tissues surrounding the descending ramus of the pubes. These injuries he considered dangerous, because large vessels, especially veins, were generally opened into. In regard to what was said regarding the rarity of the fourth position or the left occipito-posterior, he considered it to be more common than Naegele would lead us to believe. As to the Solayres obliquity, the mechanical arrangement of pregnancy not only explained it, but rendered it necessary. In the majority of women the uterus lies in a peculiar position, with an inclination to the right. The fetus lay with its back to the left side, and a little forward. The uterus was a little flattened, and had the left side tilted forward, and one might easily perceive how Solayres obliquity would occur.

Dr. MACDONALD briefly thanked the Society for the manner in which his paper had been received. As regards manipulation by catching the forehead through the rectum, he had not found any injurious results to flow from it; but he merely exerted passive pressure, as he held, that if due care were not exercised, not only might a recto-vaginal fistula be established, but in a first case perineal tear was very apt to be occasioned. He had, however, to thank Dr. Duncan for the suggestion of external manipulation.

OBSTETRICAL SOCIETY OF DUBLIN.

Meeting, December 12th, 1874.

LOMBE ATTHILL, M.D., *President, in the Chair.*

Morbid Retention of the Dead Ovum.

By ALFRED H. M'CLINTOCK, M.D.

As a general rule we find that when the embryo perishes in utero, its expulsion takes place soon afterwards—that is to say, within some hours or days. Indeed Lecieux and others have gone so far as to maintain that the womb will not tolerate its presence longer than from five to twenty days, but this undoubtedly is wrong. To the general rule above stated there are many exceptions, and they form a group of very troublesome, perplexing cases, severely testing the patience and diagnostic skill of the practitioner. Very often the patient had, at some time subsequently to conception, symptoms of miscarriage, and is under the impression that such actually did take place, though positive evidence in support of this is wanting. On other occasions, however, I have known a patient to assert, with great pertinacity, that she still carried the fruit of conception, notwithstanding that every symptom of pregnancy had ceased, and there was a strong presumption of her having aborted; yet the result proved her to be correct. Hence, I confess, I would not altogether shut my ears to the earnest representations of the patient on the point before us.

That a blighted ovum may be retained in the uterus for many months is a well-established fact, and one that should never be forgotten. Dr. Granville, in his “Illustrations of Abortion,” delineates an ovum, belonging to Sir Charles M. Clarke’s collection, which was expelled at $4\frac{1}{2}$ months of gestation, but yet the embryo had only the development, he says, of “scarcely more than a few weeks’ growth.”

A lady who menstruated in the last week of July, began about the middle of August to exhibit unequivocal symptoms of pregnancy, which proceeded regularly till the middle of October, when indications of threatened abortion appeared, with pain, and the repeated expulsion of large coagula, and substances of various appearances.

After this the previously existing symptoms of pregnancy entirely disappeared, and it was supposed that miscarriage had occurred, and that the ovum had escaped unnoticed amidst the masses of coagula. The lady resumed her ordinary habits, and went into society as usual without experiencing any uneasiness or unhealthy symptom, except irregular uterine discharges, which were supposed to be menstrual. So matters proceeded until the 7th January (that is, five months from impregnation), when after a long drive she was seized with periodic pains, accompanied by smart uterine hemorrhage, in consequence of which Dr. Montgomery (who relates the case) was sent for. He found the os uteri open, and an ovum partly protruded through it; this he succeeded in disengaging and bringing away. On examination it presented the general appearances as to size, form, and growth of the fetus of an ovum of less than two months. Cases of a like kind to this are recorded by Velpeau, Gooch, Matthews Duncan, and others—indeed every accoucheur in large practice must have met with examples. In the following case the ovum was retained for nearly seven months from the probable date of its vitality having been arrested. I saw the lady at Bray, in January, 1870, in consultation with Dr. Raverty, junior. She was the mother of four children, and considered herself to be eight months advanced in pregnancy. She had quickened at the usual time, she said, and thought she felt fetal movements up to quite a recent period. For some months back she had been frequently troubled with slight sanguineous discharges from the vagina, which had been a cause of much alarm. At the time of my visit, and for some days previously, there was a bloody discharge, and she had a dry tongue, rapid pulse, occasional rigors, and other symptoms of a febrile kind. On examination I could not discover any symptom of pregnancy except this, that the abdomen was considerably enlarged, but it was everywhere resonant on percussion. On making a vaginal examination I found sticking in the os uteri a small ovum, which I was fortunate enough to detach and get away. It was about the bulk of a walnut, quite putrid, and contained an embryo the size of a common house-fly. I conclude, therefore, that this ovum had been carried in the uterus for close on seven months after its dissolution. As the vaginal discharge had not become fetid until within the last few days, we may suppose that the ovum did not become putrid until its partial extrusion from the uterine cavity. This lady recovered, and had two children subsequently.

A case occurred in the experience of Dr. Ingleby where the embryo perished, and the ovum became “devitalized” (to use the expression of Davis) at the third month of gestation, and was not thrown off till the full term of nine months.

How long the ovum may be retained in the uterine cavity after its vitality has ceased, is a question that interests the practitioner, the pathologist, and the medical jurist. My own experience and researches upon this point tend to show that the ninth month of the

pregnancy is the outside limit of retention of the blighted fruit of conception. This would seem to be the opinion of Dr. Ramsbotham also; and I have not met with any well-authenticated instance, in modern authors, where this period was overpassed, except two cases mentioned by Velpeau. Whilst making this statement, which I believe to be consonant with facts, I must, at the same time, add that I do not see any reason, *à priori*, why an early ovum should not be retained beyond the nine months, when a fetus dying near the full time may be carried much beyond the ordinary period of gestation—as shown by the cases recorded by myself and Dr. Oldham, under the designation of “missed labour.”

It is not possible, I believe, to pronounce, with any degree of certainty, from the appearance of the ovum, how long it had been carried in utero after being deprived of vitality. In one case the lapse of a few weeks will suffice to produce the same alterations as are met with in another case after the lapse of as many months. Here our knowledge is at fault, and, therefore, in every particular instance it behoves us to speak reservedly as to the duration of the pregnancy, for fear of implicating our own or the patient's character. This introduces to us another and very important aspect—namely, a moral or medico-legal one—under which may be regarded the class of cases we have been considering. Dr. Montgomery has not failed to recognise their importance, viewed from this point of view, and gives striking cases in illustration, one of which I shall cite, with your permission:—“A lady was married in the month of March; menstruated up to June, and not after. In September her husband went abroad, leaving her, as was supposed, in the third month of pregnancy, of which she had all the symptoms. On the 4th November, and again on the 2nd December, she had some sanguineous discharge, which was looked on as a return of the catamenia, and it was now concluded she was not pregnant, but irregular. These discharges, however, did not recur until the middle of March of the following year—that is, nine months after the last regular menstruation, when an ovum was discharged of apparently two and a half months' development, the consequence of which was a conviction, on the part of some members of her family, highly derogatory to her fair fame. However, before proceeding any further, the ovum was fortunately shown to a judicious medical friend, who, wishing to have his own judgment fortified by the opinion of another, submitted the ovum to me for examination, and the real nature of the case appeared at once manifest. . . . Of the true history of the case there seemed to me no doubt. The lady had conceived in all probability, soon after the last regular menstruation in June; and about the time of her husband's departure in September the ovum was blighted, and miscarriage was threatened in November, and again in December, but did not take place; and the blighted ovum having lost its vitality and uterine connexion, ceased to grow, but was retained in utero until the ninth month from the time of conception, when it was expelled.”

In any case similar to that just related, if the practitioner, failing to interpret aright its real nature, should found his opinion as to the date of conception merely upon the degree of development or size of the ovum, it is obvious he would make a great mistake, and one that might entail very serious and unpleasant consequences to himself and to the patient. In every case, then, where our opinion is asked for as to the age of an ovum, it is a wise and safe rule to qualify our reply by saying *that at the time its vitality ceased it was* of such and such an age. We should carefully abstain from intimating how long she may have been pregnant, and thus, you perceive, we avoid all reference to the date of conception, which, in disputed cases, is really the delicate point. The size of the ovum (as distinguished from the embryo) is no reliable guide to the age of the embryo; for oftentimes the placenta and membranes have a size and thickness much beyond what the mere embryonic development would lead us to expect. Mauriceau, in his 150th aphorism, recognises this fact, and lays down the rule that the size of the fetus, in those dead abortions, does not always correspond to the period of pregnancy. Whether the secundines can continue to grow in a normal healthy manner after the death of the embryo, seems to be a moot point. The examination of a large number of aborted ova leads me to the conclusion that such progressive development may go on for a limited period; whilst that a morbid growth—such as hydatigenous or cystic disease—may take place, and proceed even to a great extent, is very well known. I confess I do not see any anatomical difficulty in either case, as the placenta and membranes derive their nourishment from the uterus, and not from the fetus. It is far from uncommon to find no trace or vestige of an embryo in the sac of the amnion—it having been either dissolved in the surrounding fluid, or the ovum never having contained an embryo, being, as Duncan expresses it, “addled from the beginning.” Hence, paradoxical though it may appear, it is possible for a woman to be pregnant, and not truly with child. The *symptoms* which may be expected in any of these cases are very succinctly pointed out by Dr. Matthews Duncan—indeed, upon this point as well as the treatment, I know of no writer who has given us so much valuable information. The usual course of events is very much as follows:—A woman conceives, and has the ordinary symptoms of pregnancy up to the second, third, or fourth month, as the case may be. She then, with or without a threatening of miscarriage, gradually loses the signs of pregnancy, and may, perhaps, have some reason to think that she really has aborted. Her health becomes impaired, pelvic weight and uneasiness are complained of, and she has frequent recurrences of sanguineous discharge, which are often mistaken for irregular menstruation, or there may be, in addition, periodic menorrhagia. In some cases the discharge is fetid, and in others it is not so. It is commonly at this stage of her history that our advice is sought; and the chief questions which present themselves for solution are:—1st. Is the uterus gravid? If so, is the

embryo living, or is it dead? In fact, our inquiries narrow themselves to this one, which is of paramount importance—viz., does the uterus contain a *living* ovum? This point once decided, our ulterior proceedings are, comparatively speaking, plain enough. Duncan observes that “the diagnosis will be easily made if the practitioner only suspects the true nature of the case, and is thus induced to investigate it.” But in very many cases a great deal more is needed, in order to arrive at a correct solution of the problem before us. Montgomery gives very excellent and judicious advice to aid us in discriminating these cases, and has well described the difficulties that beset us in making a diagnosis. “I know of no class of cases,” he writes, “more unsatisfactory or puzzling.” Besides the irregular discharges of blood, or bloody mucus, from the vagina, there is sometimes considerable periodic menorrhagia as well. The os uteri will be generally found in a gaping, patulous state, whilst the body of the organ is more or less enlarged; if, along with these symptoms, the discharges have a fetid character, there need be little hesitation in coming to a conclusion. Putridity of the discharge is a circumstance of great semeiological value in these cases, but unfortunately this symptom may or may not be present. Dr. Duncan has specially investigated the subject before us from this point of view, heading his memoir, “Presence or Absence of Fetid Discharge in Cases of Imperfect Deliverance.” If the membranes are unbroken, and the air has not had access to the interior of the uterus, there are grounds for believing that putrefactive composition will not take place. This is my own experience, as well as that of Velpeau, and I have found it to hold good at every period of pregnancy, and not in the early months only. As bearing on this circumstance—the putridity of the discharge—I may mention that once this has been decidedly developed, there is seldom any considerable amount of hemorrhage. This I first learned from the late Dr. Charles Johnson, and I have found it to be pretty generally correct. The catalogue of constitutional symptoms laid down by Burns and other writers as belonging to these cases, really does not present characteristic features, as these symptoms might often be adequately accounted for by the hemorrhagic discharges, and the prolonged confinement of the patient to the house or sofa. At the same time, I am far from denying that a formidable train of symptoms, resembling those described by Puzos, Burns, and many other writers, does sometimes occur where there is retention of a portion or of the entire ovum; and I believe we may lay it down as an aphorism, that the more advanced the development of the ovum is, so much the more likely is the retention to be productive of ill consequences to the health of the patient. On a few rare occasions I have seen symptoms present that might, perhaps, have been set down to septicemia; and two cases have fallen under my notice of phlegmasia dolens, of one and of both legs, induced apparently by the presence of a portion of the dead ovum in utero.

The following is a fair typical case of the kind which it is the object

of this paper to bring under the notice of the Society ; and I relate its history as I am able to exhibit the ovum whose retention in utero was the cause of the lady's prolonged indisposition. This lady, the wife of a surgeon in the army, ceased menstruating 11th November, 1873, and soon afterwards all the symptoms of pregnancy gradually became developed. The latter end of January she got a fright out driving, and was much shaken in a covered car ; this was succeeded by a sharp attack of diarrhea, lasting for three days, and then controlled by opium. From this time all the symptoms of pregnancy subsided. The third menstrual period (beginning of February) passed over without any appearance of blood, but soon after this, and about the middle of the month, some red discharge began to flow from the vagina, not in any considerable quantity however, nor for any length of time. It recurred again and again at uncertain intervals, of two or three or four days, obliging her to keep very much within doors, and to use little or no exertion. The returns of the menstrual epoch were marked by the loss being tolerably profuse. Her health became somewhat impaired ; she lost colour, got dark under the eyes, and was out of spirits. Things went on in this manner for several weeks, when I saw her passing through Dublin ; and being allowed to examine her, I satisfied myself there was some enlargement of the body of the uterus, but no other symptom of pregnancy. There was no discharge at this time, neither was there ulceration or patulence of the os uteri. On the 11th June, after some hours' continuance of pain and bloody discharge, an ovum was expelled, which I now exhibit to the Society.

From the appearance of this ovum, when recently discharged, I concluded it had a development of about six or eight weeks, so that it was incarcerated, subsequently to its being blighted, for about five months. At no time during the progress of this case had the discharges any fetid character.

I very much fear I have extended this paper to an unwarrantable length, so I shall conclude with a very few observations respecting the treatment to be pursued in cases of the kind we have been considering. In by far the major proportion of them, time and an expectant treatment will suffice to bring matters to a successful issue. The chief source of anxiety is hemorrhage, and hence the management of the patient must be mainly directed with a view to ward off or restrain the loss of blood. If the losses be frequent or severe, or if the patient and her friends be urgent for prompt and decisive treatment, we have, fortunately, an alternative measure to fall back upon, of which our obstetric predecessors had no experience. David Davis in his great work upon "*Obstetric Medicine*," published in 1836, when speaking of retention of the placenta or membranes after abortion, adds—"this (retention) is the more unfortunate, inasmuch as art has little in its power to effect for the relief of such cases." Now the alternative measure to which I have alluded consists in the artificial dilation of the neck of the womb, and removing from its cavity the ovum or whatever may remain of it. For the extraction of these

substances, Levret, Dewees, Bond, Churchill, and myself have devised special instruments ; but unless the neck of the womb be well open, their employment is unsatisfactory and hazardous ; except, indeed, the offending substance happen to be protruding from the os uteri.

The dilatation of the cervix uteri by sponge or laminaria tents is generally a safe proceeding, but if any inflammatory action were present it should on no account be attempted.

Dr. CHURCHILL said—I have met with several of the cases described by Dr. M'Clintock in my practice, and although I have not accurate data to fix the period of the retention of the ova, they were all retained sufficiently long to give rise to difficulty, and there is great difficulty—more than one would think from hearing them read—in dealing with these cases. It is not easy for the practitioner to resist two disturbing influences that always act. The lady tells you that she is not likely to be in the family-way, and that has, insensibly, some influence on you. A lady came up from the country to consult me for a tumour. I found the uterus as large as if it were four months pregnant. She had had twelve children, and, therefore, she had some experience. She told me she had not had a single symptom of pregnancy ; she was regular ; she had no mammary symptoms, and was quite certain she was not in the family-way. With that positive testimony, I considered myself at liberty to make an examination with the sound. I got it up five inches, and it gave no pain, and was followed by no discharge whatever. I said it would be necessary to make a still further examination by tents, but that evening I was sent to, saying she was bleeding to death. Of course, she was not ; but I learned that she had uterine pains, and I found a fetus between three and four months old in the vagina. I got it away with the placenta. . . . I was asked by the surgeon of a regiment to see the adjutant's wife. She had nursed her child to within two months. She had had several children, and her statement was that she had menstruated twice, and that she had never menstruated during pregnancy, so that, as she said herself, she could scarcely be supposed to be pregnant. There were no mammary symptoms, or sickness of stomach, but the uterus was undoubtedly enlarged. Taking these circumstances into consideration, I thought it necessary to examine with the sound. Again the introduction of the instrument was followed neither by blood nor water. I stated that I would come up the day but one afterwards to introduce some tents, but I got a note next morning, stating that she had been taken with agonizing pain in the evening, and a macerated fetus was expelled. It must have been retained some months after it had died, yet everything was in favour of the idea that she was not pregnant. Then, again you are misled by a lady telling you she knows she has miscarried. She has seen the lump expelled ; or the nurse has told her it was a miscarriage ; or sometimes you are informed that the doctor said so. One lady told me she had miscarried three or four months ago, and had menstruated since. I thought the case one of menorrhagia, and gave

her a little ergot of rye, which brought away a blighted ovum. In not a single case have I seen an offensive discharge. In another case, Dr. Pollock consulted me for a case under his care of menorrhagia, at the regular menstrual periods. The lady said she had miscarried three or four months before. I found the uterus enlarged, but not very much, and found a gaping, granular mouth of the womb; it appeared to be a case of granular endometritis, and as such I treated it. In the evening she was seized with a furious hemorrhage, and Dr. Pollock was sent for. I saw him next day, and it was agreed to plug the mouth of the womb. When Dr. Pollock went the next day to do this, he saw something protruding from the os uteri, and he got out a blighted ovum, which had been retained a considerable time. Fortunately, the treatment is not so uncertain as the diagnosis. In the first place you must restrain the loss of blood. You may do this by plugging, and, probably, the best remedy you could have for menorrhagia would be the best in these cases of the retention of a dead fetus—namely, ergot of rye. I have seen in these cases extremely beneficial results from the use of that drug.

The PRESIDENT said—Dr. M'Clintock's paper involves not only the question as to the possible duration of the retention of a blighted ovum in the womb, but a medico-legal one, when it becomes necessary to say how long it had been retained, and, further, that of diagnosis. I had an opportunity twice myself of coming to a fair conclusion as to the length of time which an ovum, after its death, may be retained in utero. A lady, in the fifth month of pregnancy, was a passenger in a train which met with a frightful accident. At the time she felt no bad effects from the shock and fright, but the uterus did not subsequently increase in size. She passed thirteen weeks without any other abnormal symptom. After that interval profuse hemorrhage suddenly set in, and she gave birth to an ovum which was not larger than it should have been at the time the accident occurred. In this case there was not any fetor, and the child was not decomposed. I have no doubt that it died at the time of the accident, and was retained in the womb for the length of time I have mentioned. Recently a lady consulted me, and said that she had two months previously aborted at the eighth week of pregnancy; that lately she had had a recurrence of the menstrual period, but that it was very scanty. I found the uterus to be of considerable size, and it occurred to me that possibly she had not aborted, and therefore I did not make any examination with the sound, but told her to come to me after the lapse of a month. On her doing so, I found her condition to be unaltered; a sanguineous discharge had occurred twice in the interval, but it evidently was not the normal menstrual flow. I therefore again deferred exploring the interior of the uterus. Another month elapsed; a brownish discharge was constantly present. The uterus, however, had not increased in size. I, therefore, now introduced the sound. A few days afterwards she brought me a small ovum which she had expelled the day after her last visit. I

am of opinion that the ovum was retained from the time she thought she had aborted—namely, for a period of four months. The questions of diagnosis and of treatment were both involved in this case. If the symptoms complained of were due to the retention of the blighted ovum, it should be removed. If, on the other hand, they depended on an unhealthy condition of the intra-uterine mucous membrane, that should be treated. But in this and similar cases, where no urgent symptoms exist, we should wait. Of course we all know that portions of an ovum may be retained for a long time. I once dilated a uterus, thinking I was going to remove a polypus. Instead of that I removed a portion of a placenta which had been retained for upwards of three months. Fetor was not a usual feature. In the case last referred to, although the ovum had been discharged three months previously, there was not the slightest fetor, and air must have entered the uterus, for the os was quite patulous; but then the portion of placenta retained was attached to the uterus, and was, in fact, a living body.

Dr. J. A. BYRNE said that Dr. M'Clintock's paper touched on an important branch of practice. He happened to see a good number of cases of abortion; and it was his opinion that, as a general rule, the ova were not expelled for a considerable time after they had perished. It was generally taught in books that the ovum was very soon expelled after it had died, but his experience did not bear that out. Nothing was more common than to be called on to attend in a case of abortion, where the woman declared herself to have been three months pregnant, but where it was found that the ovum did not correspond to that period of pregnancy, but consisted merely of a rough decidua, and no fetus. The history of such cases was probably this:—The ovum progressed for a short time, and for some cause which they could not explain—want of nutrition, an accident, or nursing—it perished, and remained for a considerable time, two or three months, in utero. Another point of importance in Dr. M'Clintock's paper was the ovum remaining in the womb without any degeneration; and he believed that wherever vesicular degeneration was the result, it must be looked upon as a special disease. The fact of the dead fetus remaining in utero, without producing putrefactive symptoms, was another point of interest. As long as it remained in the uterus it did not decompose, but the instant the ovum came into the external world, putrefaction set in. This was the general rule; but he had seen a case of a lady who had a piece of dead chorion retained for three months, with constant attacks of hemorrhage, and there was not the least putrefactive odour. Non-putrefaction may generally be attributed to non-contact with the external air, but there may be some other reason why a putrefactive effect does not occur.

Dr. DENHAM—I agree in all that has been said respecting Dr. M'Clintock's paper. We are almost, I fear, darkening counsel by words, for he has given us everything that can be said on the subject.

It is one of the deepest practical importance—one that comes every day before us, and gives us a vast amount of anxiety, worry, and sometimes disappointment. There are several points to be considered. The first is the safety of our patient; the second is the life of the fetus, and that is a point of great difficulty—to determine whether the fetus is alive or not. There are other points of deep importance. Our professional character is more often tested by cases of this kind than by any other that come under the practitioner. Then there are the feelings of the patient, of her family and friends, to be considered. In fact, they are cases surrounded by a greater amount of annoyance than any other that cross the path of the midwifery practitioner. If we can come to the conclusion that the fetus has perished, there is no difficulty as to our line of practice, but that is a most difficult point to determine. An English lady came to Ireland, and visited the Lakes of Killarney, but she did not know that she was pregnant. She got hemorrhage, and thought it was excessive menstruation. She came to Dublin, and was under my care for two months. She lost a great deal of blood, so that no one could imagine that she would produce a living child, yet she did, and it survived. If I had dilated the os in that case I should have been guilty of a great malpractice. A lady came to me two years ago. She stepped suddenly out of her carriage, and said she felt at the time as if something gave way, and on that night she aborted without the loss of a teaspoonful of blood. She is now under my care. She suffered intense pain, has passed a large amount of clots and of blood, perhaps a fetus, and is in a wretched state of health, and altogether I found it to be a most perplexing case. We are much indebted to Dr. M'Clintock for his useful and practical paper, which will confer a benefit on the public at large.

Dr. M'CLINTOCK thanked the speakers for the kindness with which they had received his paper. It brought before them a subject which, as Dr. Denham said, often caused a vast deal of annoyance, suspense, and anxiety in the mind of the practitioners and the friends of the patient, and very often that state of uneasiness and suspense was prolonged for weeks. The tendency of Dr. Denham's observations was to confirm him in the belief that the great important practical question for their consideration narrowed itself into this—does the patient carry the living fetus or not? If all the evidence led to the belief that the ovum was dead, then the treatment was simple. On the other hand, the practitioner was brought to a woman losing blood for weeks and weeks, and he might be inclined to say, "It is impossible normal pregnancy can be going on, or that the fetus is alive;" and yet such cases had been frequently seen. He (Dr. M'Clintock) was once present at a consultation with six distinguished accoucheurs, and they could not say whether the fetus was dead or not. Treatment was adopted for a dead fetus resulting in the expulsion of a living fetus. Unless the evidence was most clear, such as the presence of a putrid discharge, the practitioner would not be

justified in adopting means that would of necessity bring on miscarriage. So that in fact in dealing with these cases they must try to steer between Scylla and Charybdis. The maxim that would animate him was, that though he could not decide whether a fetus was living or dead, still if the hemorrhage was so great as to endanger the woman's life, he would then discard every other consideration, and would not hesitate to give ergot, to plug the vagina, or introduce the sound. But in case he was not very clear about the diagnosis, he confessed he would be very slow indeed even to use the sound. A good many instances had been mentioned of the kind of cases contemplated by his paper, which showed that they were not of uncommon occurrence. The weight of evidence tended to show that the discharge of the fetus occurring immediately at the time of its death was a rare concomitant, and that, certainly, was his own feeling.

A Case of Intra-Uterine Amputation.

By A. V. MACAN, M.B., M.Ch.

MR. PRESIDENT and GENTLEMEN,—The case I have the honour of bringing under your notice this evening is one of spontaneous amputation of the left forearm of a fetus in utero.

That such cases are very rare may be gathered from the fact that, so far as I can ascertain, there is no case on record as occurring in the Rotunda Hospital during the last thirty years. That such a thing is possible is of itself interesting, but I think the chief interest of such a case lies in the inquiry as to the cause or causes by which such a deformity can be produced.

CASE.—Catherine Brady, aged thirty-one, was admitted into the Rotunda Hospital on October 23rd, 1874, and was delivered, after an easy labour, of a fine healthy boy, which weighed 6 lbs. 12 oz.

On the birth of the child it was at once thought that the left forearm was entirely wanting. From the appearance of the end of the stump, it was plain that it was not a case of arrest of development, but of spontaneous amputation; and though the missing portion of the limb was carefully looked for it could not be found.

The woman had had five children, who were all strong and well-formed; she enjoyed good health during this pregnancy, which differed in no way, that she could remember, from any of her previous ones.

On examining the limb more carefully it was found that the seat of the amputation was not through the elbow-joint, as had at first been supposed, but through the forearm, just below the insertion of the biceps. On the surface of the stump there was a semicircular cicatrix, about the size of a threepenny piece, which had evidently been a long time healed. Just beneath this, but not adherent to it, could be felt the end of a small bone. When this short stump was flexed by the action of the biceps, the effect was as though the arm

itself was suddenly shortened and its end flattened out. When the arm was flexed the olecranon process could easily be made out posteriorly.

When asleep or at rest the forearm was kept extended, but when aroused the child flexed the arm frequently. It was perfectly formed in all other respects, and thrived well during the time its mother remained in hospital. She herself was evidently greatly distressed by the deformity, and was most anxious to find out something she might blame for it.

The difficulty of getting the limb photographed was great, but I am happy to say that the photographer has succeeded in getting an impression, which conveys a very good idea of the deformity.

It is, I am sure, well known to the members of this Society, that our fellow-countryman, Montgomery, was the first who gave any satisfactory explanation how such a lesion could occur. To his able paper on the subject I am indebted for a large portion of the information I have been able to collect on this interesting subject.

Before his time the deformity had been noticed by many of the older writers, who, however, explained it as being the result of inflammation and consequent gangrene. The first case that drew Montgomery's attention to the subject was one reported by Mr. Watkinson in the *London Medical and Physical Journal* for July, 1825. In this case it was found, on the birth of the child, that the left leg a little above the ankle-joint was wanting. On searching for it, the missing foot was found. The surface of the stump was nearly quite healed, and the foot, which from its relative size, seemed to have been about two months separated, showed no signs of putrefaction, but appeared to be in a state of perfect preservation. This condition of the foot, of course, excluded any idea of gangrene, and Montgomery was quite at a loss how to account for the lesion.

Four years after reading the above, he was fortunate enough to meet a case in his own practice which enabled him to give a satisfactory explanation how such a deformity might be produced. It was a case of abortion at the fifth month, in which he found, on examining the fetus, which was greatly deformed, that the legs were tied tightly together just above the ankles by ligamentous bands, which had penetrated fully two-thirds of their thickness, without there being any breach of the skin, any appearance of disease, or even any discoloration of the parts.

It would occupy too much time to go through the cases, in number about twenty-eight, which Montgomery brings forward in support of the theory that such lesions are caused by bands encircling the limbs and acting like ligatures. Suffice to say, that among these twenty-eight cases may be found illustrated all the different effects produced by ligatures, from a mere indentation of the skin to total separation of the limb.

But even when we have come to the conclusion that such lesions

are the result of ligatures applied to the fetal limbs, several important questions still remain to be answered, viz. :—

1st. How are the ligatures formed or produced?

2nd. How are they applied round the limbs?

3rd. How do they produce their effect?

Montgomery thought they were formed of organized lymph the result of inflammatory action, and were similar to the bands sometimes found connecting the lungs and the walls of the chest, or the intestines, and more especially the uterus and its appendages, with each other.

As to the way these bands become applied to the limbs, Montgomery confessed he could give no explanation, but he rejected the theory put forward by Professor Gurlt to account for their origin and application. Professor Gurlt's theory was that these bands were formed by adhesions taking place between the skin of the fetus and the amnion. As the liquor amnii was secreted, it tended to separate the two points thus adherent, and the tissue joining them became stretched out, and twisted by the movement of the fetus into cords, which the same movements would easily twine round the limbs of the fetus. The reasons Montgomery gave for rejecting this theory seem to me quite insufficient.

The third question, as to how these ligatures produce their effect, is not so hard to explain.

In the first place the ligature, if formed of organized lymph, has itself a tendency to contract on the limb which it encircles. But even if this were not the case, the growth of the limb itself would have a like effect. The degree to which the limb will be constricted by the ligature seems to depend in a great degree on the time of intra-uterine life at which it first becomes applied, and of course on the tightness of its first application, which is probably much the same in every case.

Corresponding to this difference in the time of the application of the ligature, are the different conditions of the stump or limb at the time of birth. If the ligature has been applied early in fetal life, you will find the limb most probably wholly amputated, and the stump quite healed. If somewhat later, you may still find the limb amputated, but the stump will present a small portion of its surface still unhealed, which is always found to be the end of the bones. If the ligature has been applied at a still later period, you may find nothing but a furrow or indentation on the limb. This will also, to some extent, explain why the amputated portion of the limb is so often not found. For if the separation has taken place early in pregnancy, the part amputated is very small, and is subjected to the action of absorption within the uterus during a long period. On the other hand, the nearer the end of gestation when the limb was amputated, the larger it will be, the shorter time it will be subjected to absorption, and the more likelihood, in proportion, of its being found. That such absorption does take place is probable from the

analogous cases in which whole ova or part of an ovum have been absorbed in utero. The fact also, that even in those cases where, from the very nature of the deformity, it seems certain that it was caused by a ligature, the ligature is often not found at the time of birth, would lead to the conclusion that the ligature, though at one time present, had been since absorbed; and if a ligature is thus absorbed, why not an amputated limb?

Dr. Simpson, in a paper read before the Medico-Chirurgical Society of Edinburgh, in 1841, notices a very curious occurrence in some cases where the limb has been spontaneously amputated—viz., a tendency to the rudimentary reproduction of the amputated member on the face of the stump.

After noticing that the lower you descend in the animal kingdom the more readily is an amputated part reproduced, and having given a case in which a supernumerary thumb was reproduced after being amputated, and another case in which a nail grew on the second phalanx of the finger after amputation of the first, he gives two cases in which, after spontaneous amputation of the forearm in utero, rudiments of fingers with nails attached were reproduced on the face of the stump. He says this rudimentary reproduction of the amputated limb is most frequently met with when the forearm is the seat of the amputation. He also notices the curious fact that in most cases, as in the case I have just had the honour of bringing before you, it is the left forearm that is amputated.

It has been held by some that spontaneous amputation may be caused by compression exerted by the cord. This seems at first sight almost impossible; for one cannot but think that any compression exerted by the cord on a limb, sufficient to produce amputation of that limb, would immediately stop all circulation in the cord and so lead to the death of the fetus. In other words, one essential condition for spontaneous amputation to take place is, that the fetus should continue to live for a considerable time after the application of the ligature.

In support of this view I may mention that, though Montgomery gives several cases in which the limbs were indented or furrowed by the cord, in none was the limb wholly amputated, and in most of them the fetus did not live beyond the third or fourth month. In nearly all of these cases the limb affected was on the left side of the body.

However, a number of authors have declared their belief in the possibility of amputation through such compression, and we must suppose that in such cases the compression is exerted more especially on one artery of the cord, and that the Whartonian jelly is very firm and plentiful. In support of this view these authors bring forward the fact that a living child has been born in cases where the cord was tied in a firm knot.

That the left side is the side affected in the great majority of cases

seems to depend on the fact that the movements of the fetus in utero, as deduced from the direction in which the cord is twisted, takes place in most cases from left to right.

Scanzoni, in a short chapter on intra-uterine amputation in his work on Midwifery, while allowing that in the great majority of cases such amputations are the result of compression exerted by adventitious bands, thinks that in the case given by Martin, when there was the history of external injury to the mother's abdomen, the cause of the amputation of the arm was most likely fracture, followed by extravasation of blood, and causing pressure on the nerves sufficient to lead to deficient nutrition of the part, and consequent gangrene. He thinks that in cases where the child is in every other respect well formed, the cause of the deformity is probably fracture; for in cases where ligatures have been proved to be the cause, the deformity was seldom confined to the mere amputation. *A priori*, it would seem highly improbable that anything like a symmetrical deformity could be caused by adventitious bands formed by chance. In cases, therefore, where the lesion is symmetrical and the child well formed in other respects, Scanzoni thinks the origin of the deformity is rather an arrest of development than spontaneous amputation.

Simpson also, in the *Dublin Medical Journal*, 1836, threw out the suggestion that perhaps in cases where there are any rudiments of fingers, &c., formed on the stump, the case is one of arrest of development, but that in cases of spontaneous amputation the stump resembles in every respect that left after an ordinary amputation.

In conclusion, I would remark that Schröder, in the last edition of his "Midwifery," states that such mutilations are caused by amniotic threads formed by adhesion between the fetus and amnion during the early periods of intra-uterine life. That a delay in the secretion of the liquor amnii, or a small quantity of that fluid, predisposes to the formation of these adhesions. That as the quantity of liquor amnii increases, the amnion is lifted up from the surface of the fetus with which it was at first in contact, and that thus cords or bands are formed.

Fürst, in an article in the 2nd vol. of the *Archiv für Gynækologie*, while giving three theories for the production of these bands, concludes that they are formed chiefly by some interference with the due formation of the sac of the amnion, and subsequent "plastic adhesion."

That these bands, if, instead of encircling a limb, they are only inserted into it, and thus produce a constant traction in the same direction, are capable of producing various other deformities, as crooked limbs or dislocations, is obvious.

That all these solutions are but putting the true question one step further backwards is self-evident. For even if we have proved that spontaneous amputation is caused by adventitious bands passing from the amnion to the fetus, the question still remains to be answered—viz., what causes the formation of these adventitious bands?

The PRESIDENT said the interesting communication just read differed from that which had preceded it, inasmuch as the cases referred to in the former were common, whereas amputation in utero was rare. It was the first case he was aware of as having occurred in Dublin for many years, and he believed Dr. Macan had given them all the information that was known on the subject.

Dr. KIDD—We have been fortunate, or perhaps I should say unfortunate, in the Coombe Hospital. My own experience does not extend to altogether thirty years, but I have seen four cases of this condition occur. In one of those cases in the Coombe Hospital the child died soon after birth. Dr. Montgomery assisted me in the examination of the child, and he said that he thought it the most interesting and remarkable case of the kind he had ever met with. In that case I was fortunate enough to find the limb. One leg was amputated midway between the ankle and the knee. I was not present at the birth, but when I paid my visit in the morning I succeeded in getting the membranes; and, searching carefully in them, I found the amputated extremity. The other leg was partially amputated, and there was no evidence how the amputation had taken place. In one hand a fine band passed from the top of the index finger, partly enclosed the middle finger, and attached it to the ring finger. It had very nearly cut off the top of the middle finger, and some of the fingers of the other hand had the same kind of bands attached to them. We have the preparations still in the hospital. Unfortunately the foot was allowed to dry before it was put in spirits, and it has not expanded. It is a very interesting specimen, and proves the existence of these bands, though it does not throw any light on the source from which they are derived.

Dr. DARBY said he had never seen a case of a child born with a limb amputated in utero, but he knew persons in afterlife who were said to have been so born. One gentleman told him his mother informed him that he was born without the right hand, and that the doctor who attended her said it had been amputated in utero. He had examined the arm of that gentleman more than once, and had not the slightest doubt that it was a case of defective development. It was like the fin of a porpoise, and in the stump were distinctly to be felt all the bones of the wrist and hand completely enveloped in skin. Within the last three or four years a woman came into his hospital from Kingstown, and she had the same kind of stump precisely. He felt all the bones of the hand and could count them. He thought it probable, therefore, that some of these cases set down as amputations in utero might in reality be cases of arrested development.

Dr. DENHAM asked Dr. Kidd what was the difference of development between the child born and the foot that had been amputated. It was quite clear, however much there might be in what Dr. Darby had stated, that in Dr. Kidd's case the amputation had taken place, for the foot was found. Whether an arm might be amputated and

an attempt made by nature to make up the deficiency, was another question.

Dr. KIDD said—We considered the question very anxiously, and Dr. Montgomery and I arrived at the conclusion that there were two months' difference between the development of the child and the foot. The child was born at the full time of nine months. The last case we had was of a woman who was a considerable time in the hospital as a patient during pregnancy for chronic inflammatory tumour in connexion with the uterus, a localized peritonitis. After she recovered and left the hospital she came back for her confinement. Her child had the two arms amputated and one leg. The child lived, and used frequently to visit me. He was a remarkably intelligent child, and had remarkable power in the use of his toes—he could seize a piece of bread and butter between his first and second toes and convey it to his mouth, and take a pencil between his toes and amuse himself drawing with it. His mother got an artificial leg made for him, which he wore with very great satisfaction, but he would not allow a boot to be put on the other foot, which he used for manipulative purposes.

Dr. DENHAM—I asked the question because it throws considerable light on the mode of amputation. If we consider that the pressure of the cord takes place at a very early stage, we may imagine that a very small pressure would be sufficient to stop circulation, when a species of mortification might take place, and the dead body be thus separated from the living.

Dr. KIDD—There was no sign of putrefaction whatever.

Dr. DENHAM—It may not be putrid. I believe it is a living process that takes place in the arm or leg by which the living part separates itself from the dead.

Dr. HENRY KENNEDY said he believed that in the new process of amputation by the elastic band, the amount of pressure was extremely small in proportion to the effect produced.

Dr. M'CLINTOCK—Dr. Kidd mentions a fact that bears out the view I have put forward in my paper to-night. He states that the amputated limb was not in the slightest degree decomposed, although he believes it had been separated for two months before the birth of the child. It was deprived of all vitality for two months, it was surrounded by fluid, it was at a high temperature most favourable for putrefaction, and yet there was no sign of decomposition. Does not that prove that there is something highly antiseptic in the uterus? I stated in my paper that I had seen cases which bear out the belief that if atmospheric air be not admitted, putrefaction does not take place. We have seen a fetus expelled in a softened state, but perfectly inodorous; and in a few cases, where the membranes were ruptured and atmospheric air obtained admittance, I have seen putrefaction and decomposition progress with great rapidity in the course of twenty-four hours. I remember when I was assistant at the Rotunda Hospital, a woman being brought in, and the ward in

which she was placed was pervaded by the most sickening smell. She had been in labour for days under the care of a midwife, and the membranes had been ruptured for some forty-eight hours. Emphysema arising from putrefaction had taken place, and the head of the child was a large, doughy, emphysematous mass. I sent for old Dr. Labatt, and when he came into the ward his horror exceeded anything I ever saw, and when I brought him over to the bed he examined the patient at arm's length, so dreadful was the odour. The child was a large, well-developed child, and was alive two or three days previously, and yet within that time all this dreadful putrefaction had taken place.

Dr. MACSWINEY wished to remind the Society that the conditions laid down in all elementary works as necessary for the setting up of a putrefactive process in animal tissues, were air, moisture, and a certain temperature. Now, seeing that in the case of the womb no air can obtain admission, he should like to know whether any animal decomposition had been known to have taken place without the presence of air? He should say the surprise would be if animal decomposition took place without the presence of air, and not that it did not occur.

Dr. C. F. MOORE said that if the cord got round the limb of a fetus, as the latter increased rapidly, it was easy to understand how the circulation would be stopped and the growth arrested.

Dr. MACAN, in reply, said there could be no doubt that the amputation was caused by bands. Where they came from, and how they worked were the questions to be decided. He thought the action of the bands was purely mechanical, and that they had no vital action whatever.

Obstetric Summary.

Retro-Uterine Hematocele. Extra-Uterine Pregnancy.

By M. RAYMOND, Interne des Hôpitaux.

A housekeeper, aged twenty-eight, entered La Pitié, under Monsieur Vulpian, the 15th of April, 1874.

History.—Good health heretofore. Has had two children, the last a year ago. Has always been regular till eleven months ago. Two months before she came into the hospital, after great fatigue, she had profuse metrorrhagia. This bleeding came on at the period, and lasted for six weeks. She says the blood was red and was free from clots; during this period she experienced frequent pains in the hypogastrium, but she went on with her daily work; she never had fever, or gastro-intestinal symptoms. For a fortnight she has had no loss, but she still suffers in the abdomen, especially at a level with the right iliac fossa.

Actual Condition (15th of April).—A woman of vigorous appear-

ance. She complains of leucorrhea, and acute pain in right iliac fossa. Palpation of abdomen is not very painful, even on the right side where no induration can be found. A vaginal examination is slightly painful. Vagina hot. The os directed slightly backwards, large, soft, half open, the fingers slipping into it. The lateral cul-de-sac on the right is slightly painful, and a puffiness is felt in the broad ligament on this side.

The patient has been constipated for some time. The urine is normal and free from albumen. No troubles of respiration or circulation. Musical murmur in vessels of neck. Appetite diminished. The patient is confined to bed, with poultices constantly over abdomen.

Progress.—She remained in this state about eight days; the pains continuing, however, palpation of the abdomen became still more painful on the right side, and indicated a diffused swelling occupying all this region.

April 27th.—The induration continuing, fifteen leeches were applied over the painful spot, to the great relief of the sufferer.

April 29th.—At the morning visit she was much weaker, a rapid discoloration of the skin and mucous membrane has taken place. Face livid, eyes sunken. In a word, all the signs of a great internal hemorrhage are present. Furthermore, the belly is more painful when pressed, and the induration limited at first to the right side now extends to the left.

Temperature remains normal, about 99.5° . Pulse frequent, small, thready, and 140 a minute. No real rigors, but changes from heat to cold. From this time the swelling persists, but the pain has much diminished. General state bad. Feeble digestion. No vomiting.

May 13th.—Abundant diarrhea has come on, at the same time bilious vomiting which continued till day of death.

May 20th.—The patient begins to cough and spit. There is dulness on percussion under the left clavicle, nothing on the right. Auscultation shows rhoncus and sibilus on both sides, and on the left, moreover, subcrepitant râles, and blowing respiration.

May 25th.—Râles disappeared, only rough breathing now present. Iodine applied, and an opiate julep given. General state worse, the patient cannot move in bed; decubitus left. Edema of upper and lower extremities on this side. She died in the morning on the 2nd of June.

Autopsy, 3rd June.—Abdomen: no effusion of fluid. The intestines and great omentum blackish and smell gangrenous. Coils of intestine united by numerous adhesions. The lower half of abdomen is occupied by a pyriform tumour, base above, on anterior face of which is seen the uterus, which is prolonged in the direction of the broad ligaments. It is as large as an adult head. The finger placed in the vagina, and into the neck of the uterus, shows that the tumour is adherent to the posterior wall of the uterus, and a rectal examination shows it to be anterior to the rectum. Above

the tumour are clots adhering to the deep face of the peritoneum, surrounding the sigmoid flexure on the right and the cecum on the left. Regarding the relation of the tumour to the peritoneum, the utero-vesical pouch is free, and the bladder can be easily inflated. The peritoneum covers the posterior aspect of the tumour, and does not envelop it. The anterior part of the tumour joins the uterus, which points above and to the right. From its angles start the round ligaments. On the right side are several serous cysts, under which can be easily seen the Fallopian tube and the ovary. On the left, a little behind, the tube can be isolated, but the ovary cannot be found. The external extremity of the tube ends in a cavity forming two-thirds of the tumour. This cavity in the posterior wing of the broad ligament is formed of compact white tissue, which has all the look of old tissue, having anteriorly numerous vessels of considerable size. Behind this cavity or pocket are several bloody cysts, the result of its rupture in some places. On opening the cavity clots appear, in the middle of which is a fetus, aged about three months. The cord adheres to the cavity anteriorly and superiorly, and is spread out to form the placenta. A probe introduced by the left Fallopian tube enters the tumour. The most careful dissection fails to reveal the ovary. A portion of the wall of the tumour having been hardened in alcohol, is found made up of layers of conjunctive tissue, the inner layer being lined with cylindrical epithelium. The tumour is therefore cystic, and the fetus is developed in an ovarian cyst.

Monsieur HOUEL thought this was a case of tubular pregnancy, as being frequently met with, comparatively speaking, and because the symptoms resemble those of this case. Seldom is the third month passed without a rupture of a tubular cyst. On the other hand, ovarian pregnancies are excessively rare, if they exist at all, which has been denied. In any case the matter deserves elucidation, and the state in which the tube was found should be carefully sought, whether it is the same length as the other, and its relations found to the fetal cyst. He pointed out that the hemorrhage in this case took place on the external face of the placenta. This is almost a constant rule. The bleeding may occur once, or at most two or three times, so that the symptoms of this occurrence may vary notably.

Monsieur BUDIN : I can't quite agree with M. Houel on the subject of tubular pregnancy, and I believe, to a certain extent, in the possibility of ovarian pregnancy. The existence of this variety of extra-uterine pregnancy can no longer be challenged, since Coste demonstrated that physiological impregnation is effected in the outer fourth of the Fallopian tube, or even on the surface of the ovary. If it could be actually shown in the specimen that the ovary had become the fetal cyst, an important fact would result, confirming most remarkably the teachings of physiology.—*Le progrès Médical*.

A Fainting Midwife.

The sub-editor of the *Union Médicale* relates the following :—

“A young lady, belonging to one of the most respectable families of Paris, refused, in her third confinement, by reason of a perverted feeling of modesty, the aid of a doctor, and was attended by a midwife. After the delivery she was seized with hemorrhage, which rapidly became formidable. Seeing her impotence, what did the medical woman do? Why, she fainted away! It was a mode of relieving herself of all responsibility certainly, but during her syncope the poor young mother succumbed. I ask, do we ever see accoucheurs, when in presence of flooding, fall into syncope, instead of arresting the bleeding? But syncope is in the very nature of women, and will necessarily form one of the attributes of the medical woman. The study and practice of medicine exact virile qualifications. To form an efficient practitioner, there should be open and ready intelligence, solid and varied instruction, a serious yet firm disposition, great coolness, a mixture of kindness and energy, a complete empire over all the sensations, moral vigour, and, in case of necessity, muscular strength. Are such qualities and such aptitudes, save in very rare exceptions, likely to be found united in women? Are they not precisely the very contrary of the feminine nature?”—*Medical Times and Gazette*.

Case of Cesarean Section.

Prof. E. Martin related the following case of Cesarean Section occurring in a woman, aged thirty, to the Gynecological Society of Berlin, October 6th, 1874. The pelvis was kypho-scoliotic and transversely narrowed, the sequence of abscess of the body of the lower lumbar vertebra, from which the patient suffered when young. She was seen when about seven months pregnant; there was a deep depression at the site of the third lumbar vertebra; the spinous processes of the two lower lumbar *vertebræ*, as of the first piece of the sacrum, were very prominent. The pelvic outlet was considerably narrowed transversely, so that there was not room for three fingers between the tuberosities of the ischia (about 1·5 inches). No part of the fetus could be felt. About six weeks after labour set in, which was allowed to go on for about seven hours, when Cesarean section was performed; a boy asphyxiated, but which recovered, was removed. The uterine wound, about four and a half inches long, was brought together by fourteen catgut sutures; this stopped the severe hemorrhage. The abdominal wound was then closed by wire sutures, and a compress, dipped in solution of carbolic acid, applied. The patient did well, was up on the 17th day, and left the hospital on the 20th day. (*Berliner Klinische Wochenschr.*, No. 51, 1874.)

Gynecic Summary.

Spiaggia on a Case of Thrombosis of the Utero-ovarian Veins, with Metastatic Abscesses in the Lungs.

Dr. Salvatore Spiaggia describes this case in the *Gazzetta Clinica della Spedale Civico di Palermo*, fasc. ii. & iii., 1874. The patient was a woman, aged thirty-nine, who had been married twenty-two years, and had had five children and two abortions. In December, 1873, she was attacked with slight rigors, followed by great rise of temperature. The attacks recurred daily, from the 17th to the 31st, on which day she aborted. Quinine was given; the febrile paroxysms, however, continued. On January 31st she was admitted into hospital. There was found to be considerable enlargement of the spleen, with disturbance of the circulatory, and especially of the respiratory organs. She rapidly grew worse and died.

At the necropsy, thirty-two hours after death, the lungs were found to be almost universally adherent to the thoracic walls, and were literally stuffed with purulent deposits of various sizes. In a portion of the right pleura, which remained free from adhesion, about 400 grammes (fourteen ounces) of sero-purulent fluid were found. The deposits contained pus-globules, fat-granules, and *débris* of pulmonary tissue, immersed in a fluid, which to the naked eye had the appearance of milk rather than pus. The bronchial mucous membrane was uniformly reddened; the pulmonary tissue surrounding the deposits was reddened and hard (as if hepatized), and presented signs of interstitial hemorrhage. The arteries and veins in many parts of the lung were full of white or rose-coloured friable coagula, fibrin, fat-granules, and pigment. The pericardium contained a little yellow serum; the heart was flabby. The liver presented the characters of nutmeg-liver, and was closely adherent to the diaphragm. The lower vena cava, where it was in contact with the liver, had a third of its periphery lined with a layer of matter resembling coagulated fibrin, of a dirty white colour, dense, and finely granular; it was readily torn in attempting to remove it. This substance extended as far as the surface of the utero-ovarian vein, which was completely obliterated by a whitish hard coagulum. The spleen was doubled in size, and the kidneys were anemic and softened.

Dr. Spiaggia believes that the morbid process commenced in the utero-ovarian vein, in consequence of the pressure of the uterus; that the thrombus extended into the cava, where it became softened; and that portions were carried into the circulation, and, being arrested in the small branches of the pulmonary artery, produced the abscesses in the lung.—*Medical Record*.

On the Arrested Development of the Uterus, Vagina, and Vestibulum.

Prof. Braun Fernwald, writing on the arrested development of the uterus, vagina, and vestibulum, says:—1. That the absence of the uterus in fully grown women is generally combined with deficiency of the entire vagina, but the vestibulum, breasts, and mons veneris are perfectly developed. The genital organs terminate in a cul-de-sac at the hymen; the vestibulum is a pouch about the size of a thimble; the menstrual molimen is absent; it is impossible to make a vagina in this affection. 2. The arrest of the growth of the uterus is either congenital or acquired. The vagina either ends in a cul-de-sac, or communicates with a rudimentary uterus, the shape of which varies. The external genitals are as a rule regular in form; the ovaries are normal or abnormal. The sterility present is always incurable. The uterus fetalis and infantilis result from an interruption in the continuous development of the uterus; the cervix may be from one to two inches long; the body is always very short, about the size of a hazel-nut, with very thin walls; the vaginal portion may be a mere rudiment, or very short, with a small external, but a wide internal os; the vagina is narrowed; the tubes well formed; the ovaries are absent or small; the Graafian vesicles are either absent, or the contained ova do not come to maturity. Menstruation is deficient, or seldom, irregular, scanty, or more or less painful. From the thinness of the walls this has been called uterus membranaceus, or, when it occurs in young persons after delivery, atrophica uteri precox. At puberty the growth of the uterus is often left behind, without retaining its infantile form; it is altogether small—uterus parvus—both the body and the cervix. The breasts, vagina, and ovaries are perfectly developed; menstruation is not always absent; conception may take place, and delivery at term. 3. Uterus duplex et unicornis. This malformation depends upon abnormal changes in Müller's ducts, during embryonic life, from which the vagina, uterus, and Fallopian tubes are formed. (a) Uterus duplex separatus, seu uterus didelphys (Kussmaul, Klob), is an arrest of development so that on each side a uterus unicornis exists, tolerably separate from each other, with an imperfectly developed vagina, or, if present, bipartite. This is met with only in children incapable of an independent existence; it results from the non-fusion of the dual components of the organ. A uterus bicornis, or bilocularis, results if the fusion of the middle section of Müller's ducts does not go on in the normal way; there are either two distinct uterine cavities, reaching from the fundus to the os, or there are two or more cavities formed by a membranous partition. Each cavity has its own Fallopian tube and ovary. The extreme degree of uterus bicornis, that is, where the two horns with a double vaginal portion open into a single or a double vagina, is rarely met with. Kussmaul recognises two forms of uterus bicornis: the uterus bicornis duplex, where the

separation into two halves by a conjoint partition, is complete, and the uterus bicornis infra-simplex seu semi-duplex, seu unicollis, where the separation is incomplete. If one horn of a uterus bicornis duplex be impregnated, it enlarges, and its walls thicken as in the gravid uterus; the impregnated horn rises up into the abdominal cavity, and both horns in their proportional growth retain the same relative position as when unimpregnated. In five cases of pregnancy occurring in the uterus bicornis, observed by Prof. Braun Fernwald, there were never twins, all the children were born alive, and the puerperium was natural. In uterus bicornis unicollis pregnancy and birth proceed naturally. (c) The unhorned partite uterus, uterus bilocularis (Rokitansky), uterus septus (Kussmaul), is where the cavity of an externally single uterus is divided by a septum springing from the normal fundus, and reaching downwards to a greater or less extent. When this septum is complete throughout the whole length of the uterus, Kussmaul calls it uterus septus duplex; when incomplete, uterus subseptus. The vagina may also be divided by a continuation of the uterine septum, but usually the vagina is single. Conception, gestation, and parturition are possible, and are usually attended with no particular disturbance. (d) The uterus unicornis consists of the horn only, the other, the arrested horn, being attached to it, or absent. It is a long, cylindrical, spindle-shaped body, curved to the corresponding side, and terminating in the Fallopian tube, to which a normal ovary is attached; the cervix is very small. Pregnancy may occur and terminate naturally. The accessory horn may be impregnated through the migration of an ovum; if so, it ends in rupture. Hematometra occurs when one of the mouths of a uterus duplex is imperforate, and menstruation goes on in that half. Hematocolpos occurs in bipartite vagina if there is atresia of one of the openings. Hematometra in uterus bicornis, with a rudimentary horn, has not yet been described, either anatomically, or in the living subject. The lowest grade at which defective blending of Müller's ducts can exist are the membranous bands occasionally met with in the dome of the vagina, more rarely in the cervix alone, in the middle of the vagina under the name of a duplicate hymen, and more frequently as hymen bifenestratus. Atresia vulva seu labialis consists either in adhesion of the posterior two-thirds of the labia majora, or of a genuine lengthening of the perineum. It is, as a rule, very difficult to diagnose the above-named conditions of the uterus; at times it is impossible.—*Weiner Mediz. Wochenschr.*, Sept. 5th and 12th, 1874, and *Lond. Med. Record*, Nov. 18th, 1874.

Puncture of the Neck of the Uterus as a means of withdrawing Blood.

We have no treatment for congestion and chronic inflammatory conditions of the uterus and its appendages more valuable than the withdrawal of blood. This may be done by means of leeches or by scarification of the vaginal portion of the uterus. These two pro-

cedures are not of equal value ; by leeches, through their sucking, blood is drawn from the deep parts ; in scarification the mucous membrane is more affected, and the uterine vessels are only indirectly reached. The application of leeches is often tedious and difficult (as is well known), and to avoid this, Spiegelberg has for some time adopted this procedure. He punctures deeply the cervical tissue with a long and fine halbert-shaped lance. The instrument is so fine that the openings are very small, and the hemorrhage is easily controlled. Inflammatory swelling rarely follows, or, if so, is very slight, and quickly passes away ; ordinarily the openings are closed up the day after the puncture. Puncture of the vaginal portion has been long known, but it has been only very superficial. Spiegelberg recommends the lance to be driven in up to the internal os. This operation is easily performed, no assistant is required, and it can be done in the consulting room. After passing the speculum, the cervical portion is held fixed by the long-handled hook, and the lance is driven in in several places, about three on the anterior lip, one on the posterior, and one at each angle of the lips. The punctures are best made about one-fifth of an inch from the cervical mucous membrane, and the lance should be pushed in parallel to it, otherwise the instrument easily enters the parametrian tissue. The flow of blood is red ; in ten minutes three and a half ounces can be withdrawn. The bleeding is at once stopped by a small plug of cotton wool. This procedure is far less tedious and annoying than the application of leeches, is not especially painful, is quite as effectual as leeches, and in many cases more so. Through the puncture being made deep a great number of vessels are opened, and both the mucous membrane, the cervical portion, and, indirectly, the body of the uterus, is drained of blood. A number also of the vessels, being cut through, are destroyed, and this is to be considered in inflammatory conditions of the cervix.

Pediatric Summary.

On Encephalic Hemorrhage in the Newly-born.

By Dr. PARROT.

THE affections of the cerebro-spinal apparatus in the newly-born are but very little known, as those well know who occupy themselves with pediatrics.

This is surprising, and deserves notice at a time when the diseases of the nervous system at other ages are studied so carefully, and in which pathology has on this point made considerable progress.

Already I have endeavoured by some publications to supply this want. Now, with the same end, I wish to make known the result of my researches on encephalic hemorrhage. To establish in what state I find the question I will briefly set forth the bibliographical account:

which I have collected either directly myself, or with the friendly help of my Interne à l'Hôpital des Enfants-Assistés, Dr. Troisier.

When one opens the bodies of newly-born children who have succumbed to apoplexy, says Capuron, *Traité des Maladies des Enfants*, Paris, 1820, p. 12, one finds effusion of blood, or serosity within the cranium, under the meninges and in the ventricles of the brain.

Denis, *Recherches sur les Maladies des Enfants Nouveau-nés*, Commercet, 1826, p. 392, admits that the extravasated blood may accumulate in three different places—which are, going from the periphery towards the centre—1, the arachnoid cavity, where it is black, thick, and syrupy; 2, the subarachnoid cellular tissue of the lobes of the brain, especially in the posterior part, when it constitutes a veritable ecchymosis, which is accompanied by edema; 3, and lastly, in the cerebral substance itself. The author has probably seen this last lesion but once. In the left cerebral hemisphere of a still-born child there existed a spot where the blood was converted into a little hard mass; in the right hemisphere were two spots. Their walls had the colour of burnt sienna, and the peripheric nervous tissue a pale red tint. The blood was no longer in substance; only a reddish serosity was found. Denis, who saw in these lesions the result of a traumatism, remarked that ordinarily one met at the same time, beneath the cranial tegument or in its thickness, with sanguineous engorgements, precisely at the level of the points which are exposed to contusion in laborious deliveries.

Auguste Bérard, in 1829, showed to the Anatomical Society, *Compte Rendu*, iii. p. 253, the presence in the brain of a fetus of eight-and-a-half months of a clot of the size of a nut lodged in the cerebral substance.

Cruveilhier, *Bulletin de la Société Anatomique*, t. iii. 1832, p. 27, and *Atlas d'Anatomie Pathologique*, 15 livraison, regarded apoplexy as the cause of death of at least a third of the children who, full of life before labour, succumbed during delivery; and the constant anatomical character of this apoplexy is, in the arachnoid cavity, an effusion of liquid blood, generally limited around the cerebellum, but often also surrounding the posterior lobes of the brain. In certain cases the whole of the encephalon is covered with a layer of blood, the source of which it is not always easy to trace in the rupture of superficial veins. It is rare that the hemorrhage occupies the ventricles; three times, however, this cavity was filled by clots. There is at the same time distension of the spinal dura mater, by blood contained together in the arachnoid cavity and in the subarachnoid cellular tissue. In these cases the hairy scalp is often studded with sanguineous spots; the lungs and the thymus are ecchymosed, the liver, the spleen, and the intestinal tube gorged with blood.

Cruveilhier says the apoplexy of the newly-born is venous and generally superficial. He never saw intra-cerebral spots. It always arises from a mechanical cause, and is due to compression of the neck or umbilical cord; it does not necessarily involve immediate death,

and the children may survive some hours or even three or four days.

Billard, *Traité des Maladies des Enfants*, Paris, 1833, p. 624, after having referred to the habitually congested state of the encephalon and spinal marrow in the newly-born, remarks that if the injection is sustained too long it is not slow in giving rise to a sanguineous exudation on the surface of the meninges; and that the blood thus exhaled ordinarily coagulates in a greater or less quantity, compressing the brain and spinal cord, and gives rise to the state of stupor and depression which characterizes apoplexy. The author thinks it is much rarer to find a very circumscribed cerebral hemorrhage. He only met with one case. The child died three days after birth, with the usual symptoms of apoplexy. An effusion of blood was found in the thickness of the left hemisphere, near the lateral portions of the corpus striatum. The cerebral substance was a little soft in the parts surrounding the effusion, the extent of which was an inch long by half an inch broad.

Valleix is the author who is most diffuse on the affection we are studying. He says at the beginning of a chapter devoted to apoplexy, *Clinique des Maladies des Enfants Nouveau-nés*, Paris, 1838, p. 560: Nothing is more vague or more uncertain than that which we know about cerebral or meningeal hemorrhage in the newly-born—especially in respect of symptomatologic relations. Setting aside those cases which accoucheurs especially regard, and which refer to newly-born children, he occupies himself with those which are observed some days after birth. He separately studies meningeal apoplexy and cerebral hemorrhage. The following are the facts he relates respecting the second variety. The first is borrowed from M. Vernois:—He saw a child which presented a cephal-hematoma, and had from its birth a left hemiplegia which was cured at the end of twenty-three days. It died at the age of three months, of pneumonia. The autopsy disclosed at the base of the optic layer, at the point of union with the corpus striatum, a rent in the cerebral substance, under the form of a furrow, a line and a half broad and four long. This was the remains of an old spot. In its centre was a small clot free from adhesions. Around it the cerebral substance was soft and yellow. This abnormal colouration extended to the corpus striatum.

The second case is that of an infant who succumbed at the age of two hours, with edema. The left corpus striatum presented, slightly within and behind the semicircular fillet, a small oval mass three lines long, of which the greatest diameter was directed from before backwards. It was covered by a transparent film, slightly grey and connected with the substance of the corpus striatum. When this film was pressed a semifluid black matter escaped. The neighbouring central substance was in no way altered. Following the observations, Valleix remarks, that cerebral hemorrhage properly so called is always rare; that effusions of blood in the arachnoid, frequent in

newly-born children, are exceptional some days after birth. With the preceding authors, he attributes the first to the process of labour; but of the others he does not know the cause.

According to Dubois and Desormeaux, *Manuel des Accouchements*, Paris, 1846, p. 768, there is a form of apoplexy ordinarily provoked by a difficult delivery, in which the visage is violet blue, the head tumefied and hot, the lips everted and livid, the eyes projecting, and the beats of the heart feeble or none. When death results we find all the parts gorged with blood, and sometimes this fluid is effused on the surface of the membrane or in the substance of the brain.

Among accoucheurs, Dr. Jacquemier is the one who has most occupied himself with this question. In infants dying during labour, immediately or many hours, many days even, after birth, says he, apart from the cases in which there is at the same time a fracture of the skull, it is extremely rare to find blood effused between the dura mater and the bone; it is found nearly always in the great cavity of the arachnoid. Sometimes fluid, black, viscous, as if thickened, sometimes entirely coagulated, it forms a pretty extensive layer, which covers particularly the superior and posterior part of the cerebral hemisphere, the cerebellum, the annular protuberance, and the medulla oblongata. One scarcely even meets with blood, whether in the anterior cerebral region, in the ventricles, or in the substance of the brain. It is not probable that the hemorrhage takes place by exhalation; it is to be presumed that the modification of relations determined by approximation of the sutures and the deformity of the cranium brings about the rupture of some of the slender vessels which converge towards the sinuses.

The symptoms appear immediately, on the morrow, and even three or four days after birth; more particularly in children born apparently dead which may be revived, and in those which, after a long labour, have sustained a deformity of the head. They are: agitation, anxiety, irregularity and passing embarrassment of the respiration; short and feeble cries, grimaces and singular movements, followed by immobility; dilatation of the pupils, momentary strabismus, slight trismus; alternating flushes and pallor of the face, and retention of meconium. Then follow somnolence, a continuous contraction of the hands with forced pronation, inclination towards the cubital side of the forearm, stiffening of the extended fingers on the palmar aspect of the metacarpus. The limbs of one side may have an exaggerated stiffness; but there is scarcely ever hemiplegia. Lastly, the child pales and weakens and dies at the end of a few days. In some cases, epileptiform convulsions are observed; and one may say that when they appear in the early days which follow birth, the cause is nearly always a sanguineous effusion in the cavity of the arachnoid, or congestion of the brain. The accessions are generally frequent, prolonged, and death quickly arrives.

In 1849, Dr. Notta presented to the Société Anatomique, *Bulletin*,

t. xxiv. p. 83, specimens from an infant born at term, who died in coma thirty-one hours after birth, which had been natural. At the anterior and middle part of the cerebral hemispheres the pia mater was the seat of a slight sanguineous suffusion.

Behind, the effusion was much more considerable, and was situated both in the cavity of the arachnoid and beneath this membrane. True clots were distinguishable, and the cerebral substance was softened and dark. The cerebellum presented the same lesions, and the arachnoid infundibulum of the cauda equina was filled with blood.

In 1869, Dr. Quinquaud showed to the Société de Biologie, *Comptes Rendus*, Paris, 1870, p. 150, the brain of a still-born fetus of about six months, in which two intra-cerebral spots of hemorrhage were seen. With blood corpuscles many granular bodies were found. All the muscles of the limbs were retracted, and there was a lateral curve to the right of the vertebral column.

Dr. Troisier brought before the same society, (Seance du 11 Octobre, 1871) the observation of a fetus, about five-and-a-half months, still-born, the mother of which had had a fall six days before her delivery. The placenta showed no lesion. A red clot filled the right lateral ventricle. The ventricular portion of the corpus striatum was separated by coagulated blood. A certain quantity of this liquid was found in the fourth ventricle, and in that of the septum, as well as on the lateral part of the spinal bulb. There was besides a small clot on the fornix, some sub-meningeal ecchymoses, and numerous hemorrhages in the perivascular sheath. At the level of the convolutions of the internal face of the left hemisphere a small sac existed, filled with red globules, formed by connective tissue without communication with the vascular system, although its aspect suggested a miliary aneurism. In the thickness of the epiploon little globular grains were seen, due to hemorrhages in the lymphatic follicles.

The same observer brought the following fact before the Société Anatomique, in the month of November, 1873, *Bulletin* 5^e série, t. xviii. p. 704:—

A woman pregnant over five months suffered from uterine hemorrhages, which dated from about five weeks, and for three or four days had felt no movements: was confined without difficulty after two hours' labour. At the top of the fetal cranium a sanguineous boss existed, a sero-sanguineous infiltration of the hairy scalp, and a separation of the periosteum. The left lateral ventricle was filled by a black clot, with difficulty detachable from the corpus striatum, slightly roughened on its surface. Coagulated blood was also seen in the fourth ventricle and in that of the septum. Two small hemorrhagic spots of the size of a millet-seed existed on the left hemisphere, at the level of the grey substance of the convolutions. The left lobe of the cerebellum was studded with points. On the right, partly coagulated blood distended the vein of the corpus striatum. The sinuses contained black and soft clots.

I am happy to add to these documents the following note, which

my colleague, Dr. Guéniot, has communicated to me, and in which he has collected the observations which, as an accoucheur, he has made on the subject of the present study.

Sanguineous effusions, says he, are met with often enough in the cranial cavity, when the head has been subjected to exaggerated pressure during delivery, in which case the cranium may perhaps be fractured; when there has been compression or prolapse of the funis; when delivery is performed by the pelvic extremity with energetic traction on the neck of the child; or, again, when version has been practised. Children born before term, and those in whom the cranial ossification is but little advanced, are particularly predisposed.

The effusion exists sometimes between the bony wall and the dura mater, much more often in the great arachnoid cavity, almost never in the nervous pulp. Its seat, by predilection, is the posterior region of the encephalon; it is probably owing to the rupture of some vesicle emptying into the sinus. The blood, black, viscous, sometimes fluid, sometimes coagulated, forms a covering of variable extent. At the same time the venous system of the corresponding part is much congested. If death comes on only after some days, one frequently finds serosity, it may be in the ventricles or in the subarachnoid tissue. The symptoms are variable. Sometimes it is a state of apparent death, which ends in real death unless one dissipates it by the aid of insufflation; sometimes it is agitation, sleeplessness, weakly respiration, sharp and monotonous little cries, squinting, slight trismus, which makes the child seize the nipple without sucking it, a more or less marked tendency to shivering. At other times there are convulsions, local or general, or spasm; but paralysis is altogether exceptional. Survival may be for a day, or even for a week.

It is likely that children having but a moderate effusion recover; nevertheless subsequently the relics of the primitive lesion may engender divers infirmities (strabismus, circumscribed muscular paralysis, club-foot, wry-neck, idiocy, &c.): such at least is the opinion which an English author, Dr. John Little, senior physician to the Orthopedic Hospital of London, has sought to promote, based on numerous observations.

I end these citations by the fact which I owe to the courtesy of Madame Alliot. It was observed under her direction while she was chief midwife to the Maternity. It is full of interest, and of the same order as those of my own practice. I call particular attention to the declaration which ends it.

The child Brouard, born at term after a labour of twenty-two hours, weighed on the 2nd of August, 1862, the day of its birth, 3,050 grammes. Apart from a slight dyspnea, which very rapidly disappeared, nothing abnormal was remarked until the 7th of August, though at that date it had lost 300 grammes. Then we observed in the muscles of the jaws a contraction which extended to those of the face and neck, and caused a considerable hindrance in deglutition.

On the 8th the posterior part of the trunk was invaded. Sinapisms were applied on the chest and lower limbs. The convulsive state was not continuous, and was accompanied by cyanosis at the moment of the paroxysms. On the 9th the limbs were so stiffened that the trunk of the child did not weigh more than 2500 grammes. When the pulse had slackened and the respirations had lost their fulness, we gave chloroform, which caused the tetanic stiffening to cease, and the child could swallow some drops of milk. Death took place the same day. The autopsy was made on the 11th, and one found a meningeal hemorrhage situate in the cerebellar fossæ and in the whole extent of the spinal canal. The brain, the cerebellum, and the cord, presented no lesion. One could not tell under what influence this hemorrhage was produced.

Setting aside the diverse considerations which the foregoing facts and opinions might suggest, so as to occupy ourselves only with the most important point, the etiology, we may remark that the majority of the authors have spoken of still-born children, or those who have succumbed a short time after delivery. For these the cause of the intra-cranial hemorrhage is not doubtful; it is mechanical or traumatic.

Two observers only amongst those which we have cited have studied sanguineous effusions of the encephalon apart from delivery, and both declare their inability to determine its origin.

This avowal does not surprise us: those who make it do not possess the proper elements for the resolution of this etiological problem. It is to their researches that we are led, and having found them we have determined the hitherto unknown cause of the non-puerperal encephalic hemorrhage of the newly-born.

BOOKS, PAMPHLETS, AND PAPERS RECEIVED.

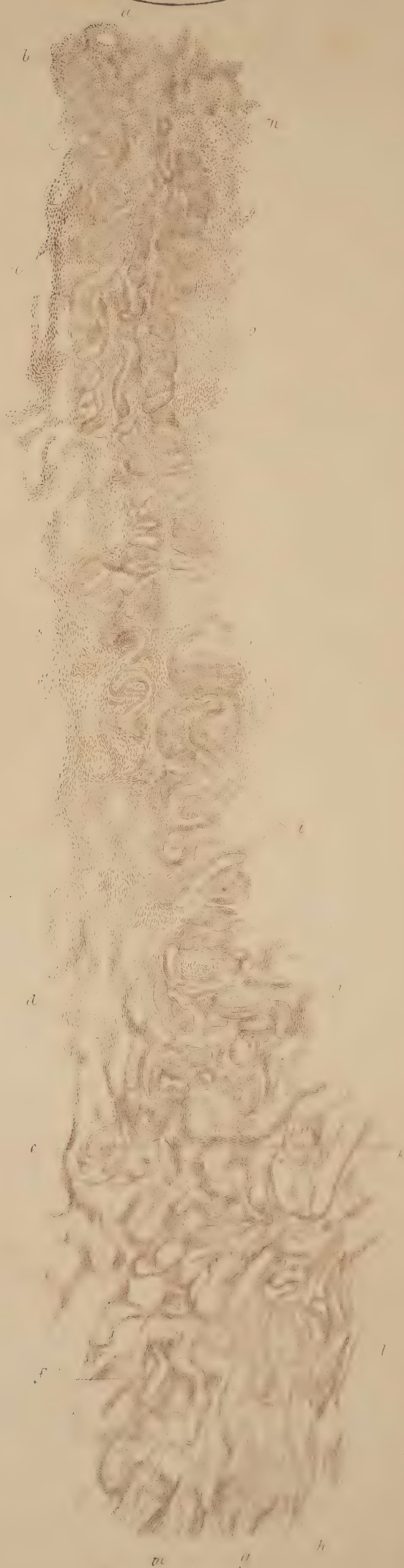
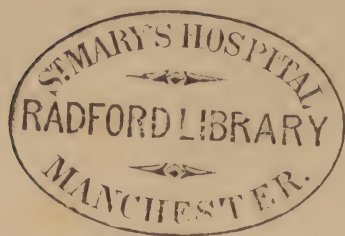
"Contributions to the Mechanism of Natural and Morbid Parturition, including that of Placenta Prævia, with an Appendix." By J. Matthews Duncan, President of the Obstetrical Society, Edinburgh. Adam and Charles Black, 1875, pp. 468.

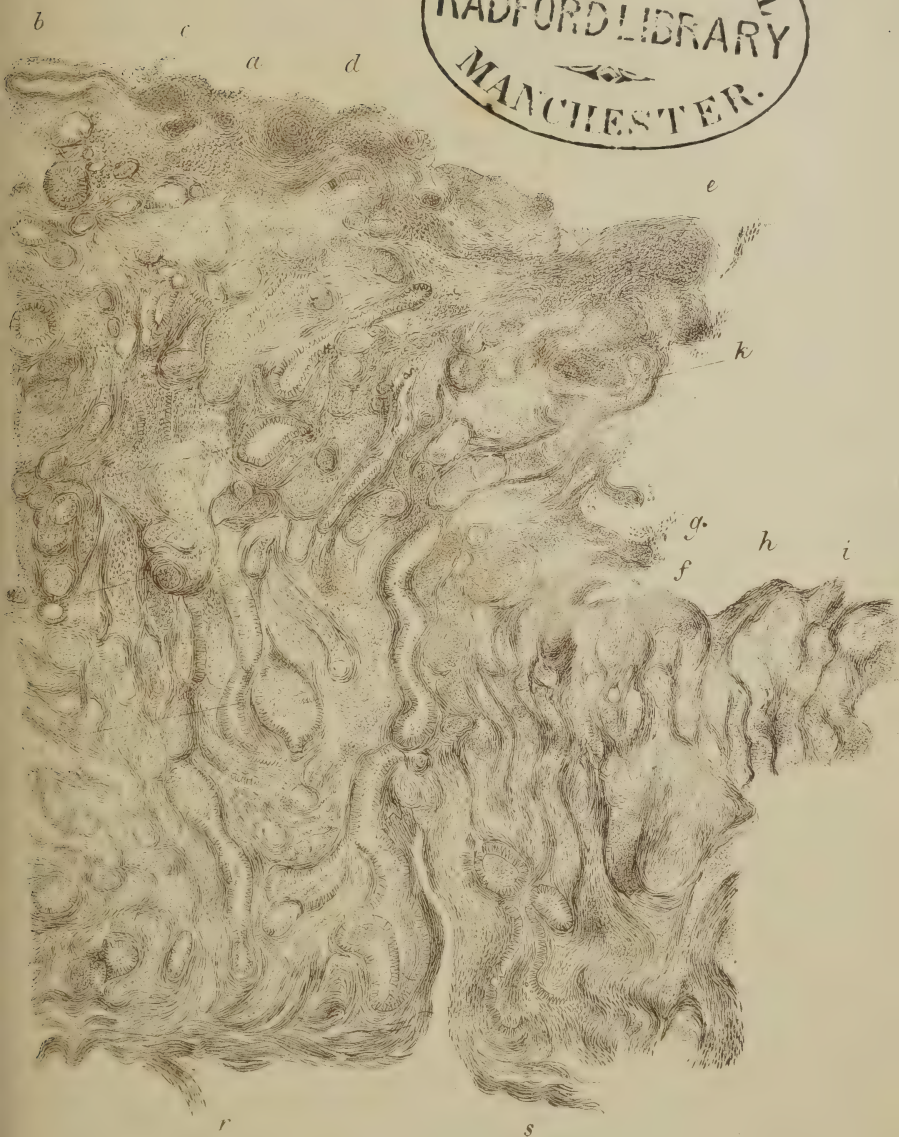
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Communications, &c. from Prof. Wilson, Dr. Grigg, Dr. Percy Boulton, Dr. John Williams, Dr. Cullingworth, Dr. McVeagh, Dr. Edis, Dr. Tilt, Dr. Fordyce Barker, Dr. Munde, Dr. Wiltshire, Dr. Carter, and Dr. A. Cordes, Geneva.

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Original Communications.

ON THE STRUCTURE OF THE MUCOUS MEMBRANE OF THE UTERUS AND ITS PERIODICAL CHANGES.

By JOHN WILLIAMS, M.D. Lond., M.R.C.P.
Assistant Obstetric Physician to University College Hospital.

(Continued from p. 696.)

6. THE next member of the series (sixth) was the uterus of a young girl, aged twenty-one years. She had been blind for some time. She fell out of a window, and died immediately. The mother stated that her daughter had menstruated three weeks before her death, and that when that event took place, she expected her period in three or four days. The mucous membrane of this uterus was of a slightly yellowish-white colour, and semi-transparent. It was thicker and more prominent in the body of the organ than the membrane of the cervix. To the touch it was soft and velvety. On its surface were innumerable small opaque white spots, which, when enlarged by a pocket-lens, were discovered to be little pits. On section the mucous membrane at the upper part of the uterus, where it was thickest, measured rather more than $\frac{1}{4}$ inch, but immediately within the internal orifice it measured only about 1 line.

Its structure was similar to that of the mucous membrane
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last described, but it was softer. No blood-vessels could be distinguished in it. By the aid of a low magnifying power the arrangement of the glands in it was seen not to differ from that of the glands of the preceding uterus. They were, however, larger than those found in the previous one, and they opened on the surface in a different manner. In the uterus last described the glands opened on a level with the general surface of the mucous membrane, but in this uterus they opened at the bottom of the little funnel-shaped pits, before mentioned. It appeared as if the surrounding tissue had outgrown the glands. One gland only opened into each pit. Columnar epithelium was not found on the surface of the membrane. This was probably due to its having fallen off soon after death, owing to the extreme softness of the tissue beneath, or during its immersion in spirit. There was in this uterus a marked line of distinction between the mucous membrane and the muscular wall everywhere except at the fundus, where the gradual transition from fusiform cells to muscular fibres, and from columnar epithelium to round cells, already described, existed.

In the body of the organ, where the above distinction was marked, the muscular tissue was devoid of glands, but at the fundus, where the transition stage still remained, glands were found in great numbers in the meshes formed by the muscular bundles (Plate II.). Though in those places where the distinction between the mucous membrane and the subjacent muscular wall was abrupt, glands could not be found in the latter, yet in its meshes were many groups of round cells. These groups of round cells were scattered everywhere, more or fewer, through the whole thickness of the uterine wall, but they were always more distinct and larger near the inner surface.

There can be no doubt, I think, that the mucous membrane of this uterus was in a higher stage of development than that of the preceding one.

The tubular glands of the mucous membrane of the human uterus, which had been noticed by Dr. John Reid, were discovered in the commencing decidua by Professors Sharpey

DESCRIPTION OF PLATES.

PLATE II.

A section, perpendicular to the inner surface, near the fundus of a uterus, three or four days before the expected appearance of the menstrual flow (Uterus No. 6, $\times 75$).

(*a*) Inner orifice.

(*b, c, d*) Glands lined by well-developed columnar epithelium.

(*e, f, g, h*) Glands lined by epithelium, in various stages of development, from round cells (as at *h*), to well-formed columnar epithelium (as at *e*).

(*n, o*) Inter-glandular tissue, fully developed.

(*i, k, l, m*) Inter-glandular tissue, in transitional state, from muscular fibre cells and round cells (as at *m*), to fusiform cells and round cells (as at *i*).

The epithelium, lining the cavity of the uterus, had fallen off, probably while the organ was immersed in spirit.

PLATE III.

A section perpendicular to the inner surface, near the inner orifice of a uterus, in which menstruation had taken place for one day before death (Uterus No. 9, $\times 75$).

(*a*) Inner surface, where the mucous membrane had as yet not been removed.

(*b*) Loop formed by blood-vessels.

(*c*) Vessel, the wall of which is bulged out by blood.

(*d*) Extravasated blood.

(*e*) Margin below which the mucous membrane had been in great part removed; *e—f*, thickness of membrane already removed.

(*g, h, i, j, k*) Blood-vessels opening on surface.

(*l, m, n, o*) Glands lined by more or less disintegrated epithelium.

(*p, q*) Section of blood-vessels.

(*r, s*) Muscular wall.

The epithelial lining of the cavity of the uterus had fallen off.

and Weber, and both these observers accordingly arrived, independently of one another, at the conclusion that the mucous membrane was converted into the decidua, and was shed during parturition—a view which had previously been entertained by some authorities, but not on the same evidence.

The two cases which form the basis of Weber's work ("Zusätze zur Lehre vom Baue und den Verrichtungen der Geschlechtsorgane"), and which he took to be cases of early pregnancy, appear to me, after careful consideration, not to be such, but to be cases in which the period of the menstrual flow had been approached at the time of death; while in the case described by Professor Sharpey there was an early ovum, so that the presence of pregnancy was established.

The drawings of the uterine glands published by Weber in the above-mentioned work, represent that portion only of the glands which is lined by columnar epithelium, and are remarkably accurate, with the exception of the diagrammatic representation of the arrangement of the glands in a longitudinal median section of the uterus. This is inaccurate in respect to the direction of the glands, for they are represented as taking a perpendicular course from the surface of the mucous membrane to the surface of the muscular wall, while, in reality, they assume in some parts an oblique direction, as already stated (Plate I. Fig. 3). Further, Weber thought that the glands terminated on the surface of the muscular wall, where their columnar epithelial lining ceased; but this does not appear to be the case, for I have, in some instances, been able to trace the glands for some depth into the muscular wall, and considerably beyond the point where the named lining ended, the deeper portions being apparently lined by round cells.

In the cases here described, the utricular glands were tubular, their lumina being circular, triangular, or oval. Their openings on the surface were narrower than any other portions of the glands. For a short distance from their orifices the glands increased in diameter, and when this increase had attained its maximum, the diameter was maintained throughout that portion of the glands which was lined by

columnar epithelium. Sometimes, but rarely, they divided dichotomously, but the process was not repeated in the same gland. This division occurred in some near their orifices, in others below the middle of their length. They ran from the free to the attached surface in a wavy or spiral manner. This was more observable in the advanced than in the early stages of their development. It appeared also as if the epithelial lining of the glands alone assumed this shape, for, when that had been removed, their channels seemed to be straight. Shortly before the appearance of the menstrual flow, the mucous membrane, at its thickest part, measured rather more than $\frac{1}{4}$ inch in depth, and that portion of the gland which was superficial to the muscular wall must have been at least $\frac{1}{2}$ inch in length.

In regard to the epithelium of the glands, there is great difference of statement. Some authorities allege that it is tessellated, others that it is columnar, and others that it is ciliated and columnar (Lott, "*Zur Anatomie und Physiologie des Cervix Uteri*"). In all the specimens examined by me, those portions of the glands which were superficial to the muscular wall were lined by columnar epithelium, but when the membrane was fully developed, the portions situated in that wall appeared like groups of round cells. The columnar cell was a four- or five-sided pyramid, placed with the broader end towards the circumference of the tube. The nucleus was oval, and situated on one side near the base. While numerous observations have been made with regard to the existence of cilia on the epithelium of the utricular glands in animals, but few have been made on this point in man, owing to the difficulty of obtaining satisfactory evidence of the existence of cilia in preserved specimens. Friedländer ("*Physiologisch-Anatomische Untersuchungen über den Uterus*") speaks of the glands of the cervix and of the body of the uterus as being lined by ciliated epithelium. He seems to have examined preserved specimens, but how satisfactory evidence of the existence of cilia was obtained by him he does not state.

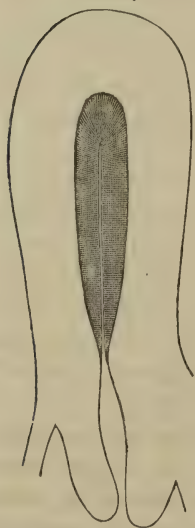
Lately I had an opportunity of examining the uterine glands in a perfectly fresh condition; and with a $\frac{1}{4}$ -inch

objective I was enabled to see the cilia attached to the columnar epithelium lining them. They were active, their motion was active and vigorous, and as the fluid around them contained small granules, their presence was easily detected.

In none of the preceding uteri could blood-vessels be distinguished in the soft mucous membrane. This was, I believe, due to the emptying of the vessels after death, together with the fact that their walls, like those of the glands when stripped of their epithelium, were so thin and transparent as not to be distinguishable, for in the uterus next to be described blood-vessels were abundant, and easily recognised, as they were distended with blood.

7. The next uterus (No. 7) was bicorned. It was taken from a patient who had died in the hospital of rapid peritonitis, caused by rupture of an abscess in the right ovary. She had died when the menstrual flow was imminent. The

FIG. 4.



Uterus just before menstruation. Shaded portion represents mucous membrane.

inner surface of the body of the uterus was of a dark red colour. The mucous membrane was thick, smooth, and very soft. Innumerable vessels ran from its attached to its free surface. They ran nearly parallel with one another, and perpendicular to the surface. There was no blood in the cavity, nor had any hemorrhage taken place into the substance of the mucous membrane.

8. The eighth uterus was that of a young girl, aged twenty years, who had died of typhoid fever. There was some bloody mucus in the uterine cavity, but it had not reached the external orifice. The lining membrane presented naked eye appearances similar to those met with in the uterus last described, except that its surface was less even, as if solution had just

begun to take place. The soft tissue forming the mucous membrane in these two uteri was in a state of fatty degeneration.

This change commenced near the cervix and on the surface, for it was more advanced in the neighbourhood of the internal orifice than in that of the fundus, and on the surface than in the deeper parts. No extravasations of blood into the membrane could be detected by the aid of the microscope. The glandular epithelium remained more or less intact at the fundus, though it had been destroyed in the body of the uterus, and the spaces occupied by it had become narrowed. These spaces were easily recognised by the extreme thinness of the parts of the section occupied by them, and by an occasional group of columnar cells, which still adhered to their walls. Running towards the surface between these spaces were blood-vessels, appearing as brownish bands, and terminating in loops under the surface. In these uteri the line of distinction between the mucous membrane at its attached surface, and the subjacent muscular wall, was well-marked and abrupt throughout the body and the fundus. This distinction was first observed within the internal orifice only, in the fifth term of the series; then it was found throughout the body, but not at the fundus in the sixth; and in this (the eighth), it was marked throughout the cavity.

From this it may be inferred that the formation of the new mucous membrane began near the internal orifice, that it proceeded gradually towards the fundus, and that in the former situation it was first perfected, and then in the latter. Further, from the structure of the mucous membrane in its different stages of development, the gradual transition from fusiform cells to muscular fibres, and from glands lined with columnar epithelium to groups of round cells, and from the gradual appearance of the abrupt distinction between them, it may be inferred that the formation of the mucous membrane proceeds from the inner layer of the wall of the uterus by proliferation—that is, from cells forming the muscular and connective tissue, and from the groups of round cells found in the meshes of the muscular bundles.

9. The ninth member of the group was taken from a patient aged twenty-nine years, who had died of peritonitis after she had undergone the operation for the removal of an ovarian

tumour. She had menstruated for one day previous to her death. This uterus presented very striking appearances.

Immediately within the internal orifice was a marked excavation, which extended upwards to the cavity of the organ for nearly an inch. The lower margin of this excavation was abrupt, and formed by the os internum uteri; the upper border was irregular and shreddy (Plate III.). Its surface was pale and flocculent. It was not injected, but presented numerous openings, through which blood could be made to ooze on pressure. The mucous membrane at this part had been removed, but not entirely. The manner of its removal was evident, for the upper margin of the excavation appeared to be melting away. Above this excavation was the rest of the mucous membrane projecting into the uterine cavity. It was very soft, of a dark colour, highly congested. Its section exhibited numerous fine white *striae*, running from the attached to the free surface, and between them numerous blood-vessels, which had a similar direction, and which formed loops under the surface. These vessels were highly injected, and immediately beneath the surface were small extravasations of blood. This congested membrane reached as far as the orifices of the Fallopian tubes. The colour, however, was less deep in the cornua of the uterus, and in that situation the membrane was thinner than elsewhere.

Under the microscope the surface of the excavated portion appeared a little irregular in outline. Many vessels opened on it by torn extremities (Plate III.). These vessels were full of blood, and doubtless their orifices were the little points on the surface, out of which blood could be pressed. There were now but few columnar cells lining the glands, and those which still remained were in a state of disintegration. The spaces left by the removal of the epithelium were numerous, and easily distinguished. The tissue surrounding the vessels and fragments of glands was the soft tissue previously described, in a state of fatty degeneration. In the part of the membrane above the excavation where it had not as yet been disintegrated to such a degree, many small extravasations were seen. These extravasations were situated imme-

diately under the surface at the angles where the loops left the trunks from which they branched.

In many places, however, the wall of the vessels had not given way, but had become bulged and distended with blood. The hemorrhage in all the cases was superficial, and in no instance have I met with hemorrhage into the deeper parts of the membrane. The mucous lining of this, as well as of the two previous uteri, was less thick than that of the sixth uterus. This, I believe, was due to the removal of the epithelium and the superficial layer of cells in a state of disintegration; this disintegration taking place in those portions of the membrane first formed—that is, near the cervix and on the surface.

10. The next uterus was that of a lady who suffered with fibroid tumour of the womb. She died two or three days after the appearance of the menstrual flow. In this uterus the mucous membrane had been removed, except at the fundus and adjacent parts. It presented naked eye and microscopic appearances similar to those met with in the uterus last described.

11. The eleventh uterus was taken from a young woman aged twenty-five years. She had died of pleurisy on the fifth day of menstruation, which usually lasted about a week. The cavity of the body of the uterus contained a sanguineous fluid, together with three pieces of membrane, the largest of which had a triangular outline, and was spread on the posterior wall of the uterus though not attached to it; it was evidently the mucous membrane covering that wall which had become detached. After removing the membrane, the surface beneath was flocculent and blood-stained. The microscope disclosed the fact that the mucous membrane had been in great part removed. The process of removal, as in the previous uteri, had begun at the inner orifice, and proceeded towards the fundus. This was well seen on the anterior wall, where a thick layer of the membrane had been shed everywhere except near the fundus. In that situation there was found a small patch of membrane, which had not been completely detached. As in the uteri previously described, the whole thickness of the membrane

was not removed at once; a layer, which was very thin near the inner orifice, and which became thicker towards the fundus, still remained. Very few columnar epithelium cells could be found in this uterus, and, except in the neighbourhood of the isthmus, where the muscular wall had begun to proliferate, there was a marked and abrupt distinction between the mucous membrane and the subjacent tissue.

12. The twelfth and last uterus was that of a woman who died after having undergone an operation for fistula in ano. The menstrual discharge made its appearance one week before its expected time, and the patient died, while menstruating, on the fifth day of the flow. There was a small fibroid tumour as large as a nut in the anterior wall of the uterus. The uterine cavity contained some bloody mucus. Its surface was flocculent. At the inner orifice there was a sudden break in the mucous membrane, similar to that found in the first uterus of this series, and in that situation the mucous membrane had been entirely removed, and the muscular fibre cells were exposed in the cavity. Higher up in the body, and at the fundus of the uterus, there remained as yet a thin layer of partially disintegrated membrane, in which were found fragments of glands. All the elements of this layer were in a state of fatty degeneration, and apparently in process of removal.

If we proceed one step further, we arrive at the condition found in the uterus first described, in which the mucous membrane had been entirely removed.

Having traced the changes which take place in the uterus during its period, we are in a position to offer an explanation of the hitherto mysterious process named menstruation.

The source of the menstrual blood has been ascribed to the vagina, the cervix of the uterus, the Fallopian tubes, the ovary—one or all. Equally diverse have been the views held as to the manner of the flow of the blood, for it has been considered as a secretion, as a bleeding from vessels ruptured on the surface of the mucous membrane, as a bleeding from vessels opening in a valvular manner on the mucous surface,

and as an oozing or perspiration from the orifices of the utricular glands.

All observers hitherto, except Pouchet, have studied the menstrual flow as a process complete in itself, and have consequently had recourse to simple congestion, or to prolonged erection, in order to explain the hemorrhage. Pouchet studied the subject from an entirely different standpoint, for he constructed a theory of menstruation (as far as the uterus itself was concerned) from the results of the examination of the discharge which appeared in the vagina at different periods of the month. From what I have stated already, it is evident that the menstrual flow is not a process complete in itself, but the terminal change only of a cycle of changes, which begins at the cessation of one menstrual flow, passes through the developmental changes of the mucous membrane of the uterus, and ends with the cessation of the flow next following. It is also evident that, important in this investigation as the examination of the menstrual discharge is, it alone cannot explain the changes which the uterus monthly undergoes, because a very great part of that discharge consists of the débris only of what once grew in an exuberant manner, and consequently can give but little indication of its source.

More recently Kundrat and Engelmann have studied the changes which take place in the uterus during the catamenia, and they have added considerably to our knowledge of the subject. They, like all previous observers, consider the time of the catamenial flow as the period of uterine activity, but they add, that the period of activity of the organ occupies a longer time than was generally supposed, and that the period of uterine rest was so much shorter—that is, they believe that the uterus is active not only during the menstrual flow, but for some time before the flow has commenced, and after it has ceased, and that there is a period of rest about the middle of the intermenstrual interval. They also suggest that fatty degeneration of the mucous membrane is the cause of the hemorrhage, for having described the swelling which takes place in the membrane before the bleeding, they add,

in reference to the fatty degeneration, "that these changes begin with the bleeding, and continue after it is certain. It is a question only in what relation they stand to the menstrual hemorrhage. On that point our anatomical investigations throw no light. Our idea, however, is that those changes in the cells develop themselves independently of the bleeding, nay, that they are the cause of it."

This is a great advance in the physiology of the uterus, but we are justified in advancing still further, and in affirming that there is no period of uterine rest, but that the organ is ever undergoing those changes which either make it a fit receptacle for the ovum when impregnated, or which prepare it to carry off the ovum when impregnation has failed. If any one stage of the monthly interval could be appropriately termed a period of uterine inactivity, that one would be the bleeding period, for then the mucous membrane undergoes fatty degeneration and disintegration; while this disintegration, however, is going on, the subjacent muscular wall is in a state of active proliferation for the formation of a new mucous membrane, so that in reality there is no period of uterine inactivity.

Again, we have met with fatty degeneration of the lining membrane in the two uteri in which menstruation was imminent, but in which it had not yet begun (Nos. 7 and 8). In neither of these uteri had hemorrhage taken place, and no extravasation of blood into the soft tissue could be discovered. The fatty change began near the inner orifice and on the surface, and proceeded over the whole of the organ as far as the muscular wall; so that the degenerative change preceded the hemorrhage, and was probably the cause of it. There is, I believe, another element besides the fatty change engaged in causing the hemorrhage, and that is muscular contraction of the uterus itself. Direct proof of uterine action taking place during menstruation it is not possible to obtain, but that it does take place can hardly be doubted, because the cavity of the uterus, when menstruation is over, though larger than usual, is smaller than it would be after removal of its lining membrane had not contraction taken place; and because, in some of the uteri examined

by me during the menstrual flow, the muscular wall was pale, though the mucous membrane, the surface immediately under the peritoneum, and the broad ligaments were greatly congested, the blood having been driven by contraction of the muscular wall to the superficial vessels. We know further that uterine action sets in during pregnancy when the placenta has undergone fatty degeneration, and it is fair to infer that the unimpregnated uterus acts in a similar manner when its mucous membrane, which in part forms the placenta, has undergone a similar change.

The contraction of the uterus drives the blood from the muscular wall into the mucous membrane ; the vessels of this membrane having undergone fatty degeneration give way, and extravasation of blood results. This extravasation takes place always near the surface, for in that situation the degenerative change has most advanced.

The rush of blood into the vessels of the mucous membrane expels the contents of the glands, together with the greater part of their lining epithelium. Even simple passive congestion, when excessive, is enough to produce this effect, as was seen in the fourth uterus of the series. This occurs before the sanguineous flow makes its appearance, and accounts in part for the increased discharge of mucus which precedes the latter for some hours.

When hemorrhage has taken place into the membrane, it undergoes rapid disintegration, and becomes entirely removed. It is removed not in pieces, but cell by cell, the process beginning immediately within the inner orifice, and proceeding along the surface towards the fundus, and at the same time towards the muscular wall. In some the removal is completed in three or four days ; in others it is not finished for seven or eight. By means of this disintegration, which affects the walls of the vessels as well as the tissue around, the former are opened, and hemorrhage takes place from them. This is Aveling's "*Denidation*."

While this destructive process is going on in the mucous membrane, active proliferation takes place in the muscular wall immediately subjacent to it. This, like the disintegration, begins immediately within the inner orifice, and pro-

ceeds towards the fundus, and at the end of the third day after the cessation of the catamenia, the lower two-thirds of the body, and at the end of a week the whole of the body of the uterus is covered by a thin mucous membrane. This membrane is produced by proliferation of the elements of the muscular wall of the organ, the muscular fibres producing the fusiform cells, the connective tissue the round cells, and the groups of round cells in the meshes formed by the muscular bundles, the glandular epithelium.

On the third day after the cessation of the flow the lower two-thirds of the body of the uterus is lined by columnar epithelium, and at the end of a week this lining is complete. It is produced probably by extension from the epithelial lining of the cervix ; it is not impossible, however, that the epithelium of the tubular glands of the body of the uterus also contributes towards its formation. An abrupt distinction between the mucous membrane and the muscular wall appears first near the cervix about the tenth day after the cessation of the catamenial flow ; it gradually extends towards the fundus, which it reaches a little before bleeding begins. At this time the membrane has reached the highest degree of development attainable by it in the unimpregnated uterus, and is in a fit condition to receive the impregnated ovum. This is Aveling's "*Nidation*." (See Fig. 4.)

Failing impregnation, fatty degeneration, disintegration of the membrane, and hemorrhage set in, and in a few days the structure, which had been formed during the preceding three weeks, is carried off as sanguineous débris. Hemorrhage takes place from no part of the uterus except the cavity of the body.

Menstruation then is neither a congestion nor a species of erection, but a molecular disintegration of the mucous membrane of the body of the uterus, followed by hemorrhage. The increased quantity of blood found in the vessels of the uterus is determined there by the active processes going on in the organ, and is in no way allied to congestion. The flow of blood into the uterine vessels attains its maximum at the time when the proliferation is at its highest—that is, a short time before the catamenia appear. When fatty

degeneration sets in the flow is suddenly reduced ; when proliferation sets in actively again, the blood supply is increased, and continues gradually to be increased until the membrane has attained its full development, when the supply is again suddenly diminished, and the changes described take place, unless conception shall have occurred. In that case the membrane undergoes no fatty changes, but is further developed, and the supply of blood becomes regulated accordingly. These changes, however, form no part of those which take place monthly in the organ, and consequently do not come under consideration here.

I am indebted to Mr. C. J. Manning, late Obstetric Assistant to University College Hospital, for the beautiful microscopical drawings which illustrate this paper.

ON THE ABSENCE OF THE FETAL PULSE DURING EXTRACTION OF THE FEET.

By A. CORDES, M.D.

Professeur libre d'Obstétrique à l'Université de Genève.

AS corroboration of the article which appeared in the OBSTETRICAL JOURNAL, January number, p. 672, "On the Absence of the Fetal Pulse during Extraction," I wish to give an extract of a case of mine. I shall pass rapidly over the circumstances which have no connexion with the present subject.

"On the 17th of May, 1874, I was summoned to Mrs. B., aged thirty, who was about to be confined of her seventh child at full term. The cervix not being dilated enough to allow me to do anything, and everything seeming right, I waited till one o'clock, when I felt the head and the cord prolapsed, and beating 100 times in a minute. The membranes were artificially ruptured so as to fix the head. It was found impossible to keep the cord reduced above the head.

"At two o'clock I pushed up the cord, and introduced the first blade of the curved forceps above the brim. The woman to whom I gave it to hold, whilst I endeavoured to

introduce the second, having herself been delivered by forceps a few months before, became frightened, let the blade fall, and flew away. I therefore immediately performed the podalic turning, and in about fifteen minutes after I extracted a male child, who opened his mouth like a fish out of the water, but did not respire.

"The cord which I purposely left without ligature did not let flow a drop of blood. Beatings of the heart were not perceptible. Exciting frictions, alternately warm and cold baths, artificial respiration, and so on, were tried. After about a quarter of an hour I put a ligature on the cord, when the child cried and respired eight times a minute. At this date, January 20th, he is a big boy still living.

"This observation proves, I think, that we should never despair of a child, although the cord does not beat. In this case it remained a quarter of an hour without giving a drop of blood, and still the child survives.

"It proves also, as Barnes says ("Obst. Op.," 2nd edit. p. 228), 'That the practice of obstetrics demands, even more than medicine or surgery, steadiness and promptitude in judgment, courage under difficulties, and physical skill.'"

Reports of Hospital Practice.

GLASGOW MATERNITY HOSPITAL.

Report for the Year beginning 15th Nov. 1873, till 15th Nov. 1874,
by R. D. TANNAHILL, M.D., and J. G. WILSON, M.D.

The number of women confined in the Hospital during the year amounted to	305
The number of women confined at their own homes amounted to	986

Total number 1291

	Boys.	Girls.	Total.
Children born in Hospital alive at full time .	150	129	279
„ still-born at full time	9	6	15
„ born prematurely (<i>alive</i>)	3	5	8
„ „ „ (<i>dead</i>)	4	4	8

 310

Making a total of 310 children born in the Hospital (there were 5 cases of twins).

	Boys.	Girls.	Total.
Children born alive at mothers' homes at full time	469	427	896
„ „ dead at full time	43	24	67
„ „ prematurely (<i>alive</i>)	6	9	15
„ „ „ (<i>dead</i>)	11	14	25

 Total number . . . 1003

There having been 17 twin cases.

Preternatural cases (requiring medical interference) in Hospital	4	} 10
Instrumental cases in Hospital	6	
Preternatural cases out of Hospital (requiring medical assistance)	27	} 52
Instrumental cases . „ „ „	25	

 Total number . . . 62

Number of Scotch women confined in Hospital	252
„ Irish „ „ „	48
„ English „ „ „	5

 Total number . . . 305

Maternal deaths in Hospital	3
„ „ out-door	9

 Total . . . 12

CAUSES OF MATERNAL DEATHS IN HOSPITAL.

Puerperal septicemia	1
Metritis with pneumonia	1
Nervous shock	1
	<hr/>
Total	3

CAUSES OF MATERNAL DEATHS OUT OF HOSPITAL.

Only nine are reported, and of these six died from puerperal fever, one from pneumonia, and two from debility and rapid exhaustion.

From the preceding Statement, it will be observed that 1291 women have availed themselves of the benefits of the Institution. There is an increase of twenty-six in the aggregate number of cases treated by the Officers of the Hospital (assisted by the Students and Nurses), as compared with the number of last year. It will be remembered that in last year's Report it was noted that the number of cases was larger than in any previous year. The Institution is therefore gradually extending the sphere of its usefulness.

The figures given above place in a strong light the necessity and ever-increasing importance of such a Hospital when placed in the centre of a poor and crowded district of a large city. It is noteworthy, however, that the increase is entirely in the number of out-door cases, there being, as compared with last year, a decrease of seven in the intern department. This decrease is accounted for by the fact that certain Parochial Boards who formerly sent us a number of patients no longer require to do so, as they have had confinement wards fitted up in their own hospitals.

We are glad to be able to point out that the statistical report given above presents the Institution, and the work effected by it, in a very favourable aspect. The statistics of such a Hospital can never, for obvious reasons, compete in point of favourable outcome of cases with the results obtained in private practice. An institution such as this, as

has often been pointed out, inevitably becomes a centre of attraction to which the worst and most difficult class of cases gravitates as by a natural law. The fact is well exemplified by the three cases of death which occurred in the Hospital during the year. In each of these cases the antecedent condition of the patient rendered a successful issue almost hopeless from the first. One was a case of puerperal convulsions, and the patient had been in a state of complete insensibility for several hours before her admission. She was safely delivered of a stillborn child ; and although after two days consciousness returned and she appeared to be doing well, she finally, on the eighth day, sank from nervous exhaustion. In another, the woman had been weakly and suffering from chest disease before her confinement ; while in the third case, which was one of pelvic deformity with severe labour, the patient was, however, safely delivered of a living child, but died from an attack of puerperal fever. In each of these cases, therefore, previous illness or other conditions of the patient must be credited with the fatal result, to which the circumstance of the labour having taken place in the Hospital certainly in no way contributed.

It will be observed that the percentage of fatal cases in the house is somewhat under one per cent. of the whole number treated. It may be interesting to compare this result with that of the total deliveries in Glasgow for one year. During the twelve months ending 31st October, 1874, a period almost conterminous with that over which our Report extends, and at all events quite comparable with it, it appears that there were in Glasgow 19,814 births and 113 deaths of mothers registered from "metria" and "child-birth." This gives a percentage of fatal cases of fifty-seven—more than half per cent.—for the whole city. It must be remembered, however, that there is some natural disinclination among practitioners to register child-bed deaths as such, and to some extent this will affect the accuracy of the returns of the Registrar-General. Taking the whole circumstances into account, especially the class of patients who receive the benefits of the Institution, with bodies often debilitated by want or exhausted by disease, and minds filled with anxiety or de-

pressed by despondency—the wonder is that the proportion of fatal cases is so small. It will be observed that the percentage of deaths in the reported out-door cases is nearly the same on this occasion as that of those delivered in the house.

During the year there has been no occurrence of septic or epidemic diseases in the Hospital, a result doubtless to a great extent due to the systematic and complete ventilation of the entire building, and the pains taken to secure the thorough cleanliness of the patients and their surroundings. The prevalence of epidemic disease in the city during the latter part of the year renders the immunity enjoyed by the Hospital a very gratifying circumstance.

The Medical Officers have only further to add, that as a School for Instruction in Practical Obstetrics, the Institution has, during the past year, been more largely taken advantage of by Students of Medicine and women in training for Midwives and Monthly Nurses than in any former year. It remains to be seen whether the opening of the Western Infirmary, and the consequent comparative isolation of the University Medical Students to the Western districts of the City, will have any effect in diminishing the attendance at our Hospital. There need, we think, be no fear for the future, if the Hospital continues to be conducted as hitherto, for its advantages as a field for clinical study are so great, and in Glasgow so unique, that it will always attract a fair share of Students desirous of acquiring practical instruction in Midwifery—one of the most important branches of the medical profession.

THE OBSTETRICAL JOURNAL

OF

GREAT BRITAIN AND IRELAND.

MARCH, 1875.

DELIVERY OF THE PLACENTA.

IN the admirable Report of the Rotunda Lying-in Hospital for 1874, a full abstract of which appears in the present number of this Journal, the Master, Dr. George Johnston, makes some remarks upon the treatment of retained placenta. He concludes by saying, "We impress on our pupils never to hurry the removal of the afterbirth ; but, simply by steady pressure in the axis of the brim, it will be expelled, in the great majority of instances, within fifteen minutes, besides which it diminishes the liability of post-partum hemorrhage." It must be confessed that upon first reading these lines we were somewhat inclined to look upon them as trite. We believed that the method of delivering the placenta generally known as Credé's, was so universally appreciated and adopted as to require no further promulgation amongst educated obstetricians. We were destined, however, to have this opinion completely negatived, and the necessity for Dr. Johnston's remarks triumphantly shown. Within three pages of a recent number of a contemporary Journal, two writers describe their practice as opposite to that which we hoped was universal. One says, "The abdomen still remaining unusually large, and the placenta not coming away, I first repeated the ergot to insure firm contraction, and then used moderate traction on the cord, which being a thin one soon gave way." The other, describing how the placenta should be delivered to *prevent* post-partum hemorrhage, recommends that "the cord should be wound round the forefinger of the left hand ; and at the same time the forefinger of the right hand run up the cord to the os uteri, and

traction made. If the placenta be ready to come, it will come by a gentle effort. If the insertion of the cord, or an edge of the placenta can be felt, then by a combined action of traction by one finger, and hooking with the other the expulsion of the placenta is nicely assisted." Every one must agree with this latter practitioner in condemning those who have "the hardihood to affirm that the uterus should be grasped at the moment of the birth of the child, and the placenta forced down *vi et armis* and out by the same pain that expelled the child, or at the longest in the next," but few we believe will agree that "the practice seems founded upon a mistake." Those who adopt Credé's method, do not act in this precipitate way, but so use their power as to cause the placenta to be "expelled gradually and by gentle efforts." This author deprecates the manual extrusion of the placenta as one of the "*membra dejecta* of the mechanical school," and yet he in the same "counterblast" (for so he is pleased to call his remonstrance) recommends the younger members of the profession not to use ergot when uterine action is required, but, amongst other things, to try to procure it "by a dig at the sacral plexus, or a pull at the perineum on the access of a pain." Every man has a right to hold and publish his opinions, but we cannot help expressing the conviction that the encouragement of the removal of the placenta by traction, no matter how gently it may be done, is retrograde, and not consonant with the experience and teaching of the best modern obstetric authorities in the world. We hope these gentlemen, whose papers are in many other respects admirable, will carefully reconsider the subject, and eventually, both in their practice and writings, use and inculcate the plan of delivering the placenta so necessarily alluded to by Dr. Johnston.

Abstracts of Societies' Proceedings.

OBSTETRICAL SOCIETY OF LONDON.

Meeting, February 3rd, 1875.

WILLIAM OVEREND PRIESTLEY, M.D., F.R.C.P., *President, in the Chair.*

Professor Gustav Simon, M.D. (Heidelberg), and Professor Courty, M.D. (Montpellier), were elected Honorary Fellows of the Society.

The following gentlemen were elected Fellows :—A. Cordes, M.D. (Geneva), Richard John Morton, M.R.C.S. (Aylsham), Ernest Watson Paul, L.K.Q.C.P.I. (Brixton), and Richard Thomas Smith, M.D. (Haverstock Hill).

The PRESIDENT then delivered his inaugural address.

Professor CASELLAN, of Milan, presented his transfusion apparatus.

Dr. T. C. HAYES exhibited a uterus and appendages which were connected by adhesions in several places to the large intestines. The patient, aged forty-two, had had two children and four miscarriages, had been subject to frequent and copious menorrhagia, and latterly had three or four attacks of hematemesis. She lived in India several years, where she had ague and rheumatic fever. She was admitted into King's College Hospital suffering from cardiac disease, contraction of liver, and enlargement of spleen, associated with ascites and edema of legs. Death resulted after an attack of hematemesis. There was no reason to suppose that she had been intemperate, nor was there any clear evidence of her having had syphilis. Spite of the adhesions, the uterus was remarkably moveable; the menorrhagia was doubtless passive, and was probably intensified by the serious obstruction to the return of blood from the uterus, caused by the adhesions.

The PRESIDENT inquired whether there was any history of previous pelvic peritonitis, to which Dr. Hayes replied in the negative. The President remarked that the amount of pelvic adhesions and the absence of any history to explain them was a point of interest.

Dr. EDIS alluded to a case of his recently published in the *Lancet*, where morbus Brightii was the exciting cause of profuse menorrhagia, this latter condition being often dependent upon the most varied conditions both general and local.

The Couchaid.

Dr. EDIS exhibited for Dr. E. Diver an apparatus designed to assist labour and economize force during parturition, enabling the patient, by pulling during her pains, to give comfortable pressure to

the back, and support to the uterus at the same time. It consisted of a cushioned back-pad, and another for the front with two stirrups for the feet and a series of connective straps and cords.

Dr. AVELING thought the ingenious apparatus for accelerating labour just exhibited ought to be used with the greatest caution. He feared that, more particularly in the early stage of labour, if not carefully applied, it might have exactly the opposite effect to the one desired; and as the patient herself had to use it, it was necessary that she should be at the time composed, or at least quite mistress of her own actions. A severe pain might either cause her to abandon it altogether, or use it too violently. He thought pressure by the hand preferable.

Dr. MURRAY objected to the apparatus on the score that it would be advertised as recommended by the Obstetrical Society. He thought we had sufficient to attend to in looking after the mother and child without complicating matters by applying any such apparatus.

Aborted Ovum.

Dr. EDIS exhibited an ovum expelled about the eighth week, showing the villi of the chorion. The decidual membrane had not been passed.

The PRESIDENT remarked it was a pity the outer coats had not been obtained, so as to make the specimen complete.

Speculum Trough.

Dr. EDIS showed an india-rubber trough he had designed to fit over any speculum so as to prevent wetting the bed in cases where it was necessary to employ the syringe. He had tried it in several cases, and found it answered the purpose well. It was similar to the ordinary ear trough, except that being elastic it could readily be attached to any speculum, and did not interfere with any manipulations that might be necessary.

Report of Three Cases of Cephalotripsy.

Dr. J. BRAXTON HICKS narrated the history of three cases in which he had resorted successfully to this operation, illustrating his remarks by the casts of two heads taken before the removal of the instrument. He employed it as a tractor as well as a crusher, and felt confident that it would in the main supersede the crotchet and craniotomy forceps in all cases of severity. In the first case the bony outlet was so small that the hand could not be passed up to the brim; delivery was effected by the cephalotribe after the crotchet and craniotomy forceps had failed. In the second case, the breech pre-

sented, and the labour was very tedious, the conjugate diameter of the brim being only about two inches. The third case occurred in a primipara 4 feet 3 inches high, small sized in every way, and hollow-backed. The two latter recovered perfectly in a fortnight; the first case succumbed on the fifth day.

Dr. MURRAY inquired if Dr. Hicks had ever known the instrument slip. It seemed to him (Dr. Murray) that its principal value was that of a tractor; as to pressure on either side, it was merely a change in the bulk of the head. He had never used the cephalotribe himself, but if the head were not perforated, lessening it one way would only increase it in the other. Without wishing to disparage the instrument, he thought that if we were able to attain sufficient power with the hook and forceps, delivery would be quite as easy as with the cephalotribe, especially as Dr. Hicks said it would supersede the craniotomy forceps or blunt hook after perforation.

Dr. HICKS stated that he always perforated first. If the head were too high, it was no case for cephalotripsy. It acted as a crusher and tractor: there was no outbulging.

Dr. PLAYFAIR thought Dr. Murray's objection was based on the fact he stated—viz., that he had never used the cephalotribe. Any one who had done so must at once admit its immense superiority, and it was strange that even after many years of use teachers recommended the crotchet and craniotomy forceps for ordinary cases, instead of teaching, as they ought, that the cephalotribe was the proper resource whenever it could be used. No better proof could be given of its value than the last of Dr. Hicks' cases, in which two experienced operators, medical officers to one of our largest obstetric charities, had failed to deliver with the older instruments, when the cephalotribe had succeeded. Could any evidence of its value be stronger? One particular value of the operation was also well illustrated by the paper—viz., the safety to the maternal soft parts, which were effectually preserved from injury by the spicule of bone, in consequence of their being within the scalp. Hence the dangers arising from picking away the broken bones was entirely avoided.

Dr. HEYWOOD SMITH said that one of the chief advantages of cephalotripsy was the rapidity with which delivery was accomplished, and this was an element of great importance, for the cases were generally those where labour had already been prolonged until the mother's powers were becoming exhausted, and when every minute saved was of the utmost importance. He, unlike Dr. Murray, had never performed craniotomy proper, and in all the cases where he had been compelled to perform cephalotripsy the facility of delivery was one of the remarkable features. Perforation of course was first employed.

The PRESIDENT remarked that he had often been struck, in operating, with the uselessness of many instruments. Where the skull was firm, even Sir James Simpson's cranioclasps was useless. With the cephalotribe the bones were broken down more readily, and a

firmer hold was obtained than by other means. In some cases the spinal hook of Dr. Oldham was most efficient.

Dr. HICKS, in reply, stated that he had found the head expand after removing the instrument, not because of the brain within, because by passing the perforator three or four times through it, its resistance was overcome, but it expanded from its own elasticity, tending to recover the globular form; this he had proved by frequent experiment, and therefore he had many times in this Society pointed out the advantage of drawing down by the cephalotribe in opposition to the French recommendation, that it should be removed, and the head allowed to be expelled by natural efforts, or drawn down by crotchet. With regard to the remarks which fell from the President, he said till he had employed the cephalotribe he was much indebted to the cranioclast of Sir James Simpson. But with regard to the use of Dr. Oldham's vertebral hook, and the fixing the crotchet in the foramen magnum, he thought there had been much misapprehension. With regard to the crotchet, it could not pass into the vertebral opening, but if it could catch the sella turcica, or if Dr. Oldham's hook were passed into the foramen magnum, this did not assist the descent of the head, for if the cranial base measured three inches, and the brim only two inches, no amount of pulling would conquer the difficulty. All that was required was bringing the head side or face-ways. From some unaccountable error, a constant answer from students to the question, how would you draw down the head after perforation, was "by the vertebral hook!" no other instrument was thought of. The vertebral hook was invented by Dr. Oldham to seize the head which had been torn off the body in breech presentations by being passed into the spinal foramen of the remaining *vertebræ*. With regard to the advantages of the cephalotribe over the crotchet and craniotomy forceps, it must be remembered that these instruments can only act by virtue of the compression of the mutilated head against the vaginal walls, and therefore the pressure was in direct ratio to the traction employed, whereas the cephalotribe by compressing the head directly, removed all the pressure and friction in a fourth of the time, and even in some cases in a tenth it would take to deliver by the old plan.

Dr. HAYES stated that some French authors advocated clearing out the brain before applying the cephalotribe. Dr. Hicks seemed always to stir the brain up well, and so break it up.

Uterus from a Case of nearly Sudden Death.

Dr. HEYWOOD SMITH exhibited the uterus and ovaries of a woman aged twenty-six, who had died the previous day within fifteen minutes of hemorrhage into the pelvis. She had been confined sixteen days. On the third day had a sharp attack of puerperal septicemia, from which she with difficulty recovered. She had been sitting up for two

days, when suddenly, about 12.30 P.M., she became faint, struggled violently, became blind, and died in less than a quarter of an hour, retaining her consciousness until the last. At the post-mortem the pelvis was found full of blood. The uterus was insufficiently contracted, probably the result of the attack of septicemia; the left oviduct adhering to the broad ligament as the result of recent inflammation, and on the left ovary a small opening. The right ovary was studded with small cysts. In reply to the President, he stated that the source of the hemorrhage had not been discovered.

Dr. BLOXAM remarked that, given the conditions stated by Dr. Smith, those who were familiar with the symptoms of pelvic hematocoele, and with the fearful organic shock attending the outpouring of blood into the peritoneal cavity, would expect such a patient rapidly to succumb.

The PRESIDENT requested Drs. Playfair, Bloxam, and H. Smith to examine the specimen further with the view of discovering the source of hemorrhage.

Note on the Treatment of Chlorosis and Anemia with the Phosphide of Zinc.

Mr. J. ASHBURTON THOMPSON communicated a short paper exemplifying the advantage of employing this drug. It succeeded in relieving the symptoms where iron had failed, and that rapidly. Phosphorus was of great value in the treatment of patients recovering from uterine hemorrhage, and in all cases of anemia, and seemed to exercise a specific influence upon the neuralgia so often met with in these cases, encouraging the general nutrition of the body. Free phosphorus is not the treacherous poison it has hitherto been considered to be. It is a fatal and potent poison it is true, but its therapeutic effects may be obtained with precision and perfect safety. If proper *formule* be employed, no apprehension of unexpected or uncontrollable poisonous effects of a therapeutic dose need hinder its general employment.

Dr. ROUTH said it might be known to some members of the Society that he had made several inquiries on the employment of phosphorus. In some cases it produced marvels, especially in cases like those detailed by Mr. Thompson, due to deficiency of phosphorus in the system. But it occasionally acted injuriously, producing headache and giddiness, and in a few cases (of idiosyncrasy, perhaps) it acted as a deadly poison, even in the first dose, sometimes immediately producing vomiting and syncope. The safest preparation was the phosphide of zinc; but it was a medicine always to be closely watched when given.

Dr. TILT inquired what preparation of phosphorus Mr. Thompson recommended.

Mr. THOMPSON, in reply, said Dr. Routh had revived the old objection, not because it was a poison, but because we cannot calculate the results. These arose from decomposed phosphorus.

Dr. PLAYFAIR inquired whether the zinc phosphide was not insoluble in pill.

Mr. THOMPSON replied that some acid tonic given simultaneously would serve to assist the decomposition.

The Treatment of Rigid Perineum and the Avoidance of its Rupture.

Mr. TRESTRAIL (of Aldershot) read a communication on this subject. In cases where the perineum was long and firm, he materially shortened labour by hitching two or three fingers into the posterior commissure, and keeping up extension, thus speedily enlarging the outlet, and obviating the necessity for employing the forceps. He cited a case illustrating this method.

Cases of Prolapsus Uteri treated by Dr. Vriiliert's Pessary.

Dr. A. CORDES (of Geneva) communicated the history of two cases treated by this instrument, which consists of a Hodge's pessary bent upon itself.

THE PRESIDENT'S ADDRESS.

GENTLEMEN,—In taking the Chair, which by your kind favour I occupy for the first time this evening, I am anxious to express my sincere thanks to the Society for according to me a position so distinguished.

When my nomination to the Presidency of the Obstetrical Society was first mooted, I confess I felt many misgivings as to my competence for such a responsibility. It is true that some twenty years occupied as an obstetric teacher and practitioner may give one a claim to be numbered among the seniors of the profession; but the pressure of other occupations, and considerations of health, have for a considerable period obliged me to abstain from attending the meetings of this and other societies, and consequently I am less familiar with the modes of procedure than some of our more eminent Fellows, who have "borne the burden and heat of the day," and who might justly look forward to the President's Chair as the reward of excellent service to the Society.

My objections on these points were overruled, and, when I understood that it was the earnest wish of the Council that I should be put in nomination, I could no longer hesitate to submit myself to the wish of the Society, and to accept what was so spontaneously offered. It remains for me to tender my acknowledgment of the honour con-

ferred upon me, and to thank both the Council, who nominated, and the Fellows of the Society, who have ratified its selection. Whatever of diligence and of zeal may be required of your President, I shall do my utmost to bring to the discharge of the duties of this Chair, and, aided by our experienced secretaries, I may hope to conduce to a satisfactory despatch of business, and a general advancement of the objects contemplated in the foundation of the Society.

Having been one of the original members—one of the small band who in 1858 met to consider the propriety of instituting an Obstetrical Society in London—I have watched with much interest its development from infancy to maturity, and the success it has achieved may well be a source of pride to its Fellows. There is, I believe, no parallel instance in the history of a medical society in this country of such rapid growth in so short a period as that which has taken place in the Obstetrical Society. In the short space of sixteen years, it has enrolled well-nigh 700 Fellows, and the annual recurrence of the *Transactions* testifies to the large number of active workers and contributors. The fact, indeed, has become apparent that the Society supplied a want which had previously been indefinitely felt by a large number of medical practitioners, and which only assumed the concrete when the Society was formed.

It has been said that every practitioner regards himself as an expert in obstetric practice, which perhaps is only another way of saying that most general practitioners have felt the tug and strain on their resources in midwifery practice, the necessity for immediate action in moments of peril, and that most have some victories to chronicle, some recollection of difficulties surmounted which have left perhaps more vivid impressions than in any other kind of practice. Be this as it may, the fact that by far the largest proportion of medical men in this country are engaged more or less in the practice of obstetrics, and in treating the diseases of women and children, affords a broad basis for the interest which is felt in a society whose object is to promote improvements in the obstetric art, and its influence permeates and pervades the mass of our medical brethren in proportion to the importance of the subject to them, and its bearings on their daily work.

Reviewing the history of the Society—young as it may be—I cannot doubt that it has done much good, and achieved something by way of advancing the science and art of obstetric medicine. The number and diversity of the contributions contained in the *Transactions*, the long record of pathological specimens, the exhaustive discussions on special topics, are all evidences of the zeal possessed both by town and country Fellows; and an appreciation of the scientific value of their contributions is shown by the sale of the *Transactions*, and by the frequency with which they are translated or transcribed into the literature of other countries. But I may be permitted to point out that, in proportion as the influence of the Society has grown as an exponent of gynecological knowledge and

opinion at home and abroad, so is its responsibility ; and the greater the care which should be exercised on the part of the Fellows in the enunciation of opinions which, if promulgated, may possibly, though perchance unintentionally, form the groundwork for mischievous errors in practice.

I have often been struck with the curious current perversion of the views of some author who may have taken especial pains to make himself understood and to guard against misconception. In the University of London examination for degrees in Medicine, nothing was more common than to attribute to the late Sir James Simpson the practice of separating the placenta in all cases of *placenta prævia*, when it is well known to those who have studied his papers that he only recommended this remedy in some unusual and embarrassing conditions. But if errors may be promulgated from mere misunderstanding, how much more mischief may arise from teachings which are themselves erroneous or pernicious ! Enunciated under the auspices of this Society, and promulgated in the provinces wherever the proceedings are read, the results may be disastrous both to doctor and patient ; and hence it behoves each Fellow to guard both himself and the Society against the acceptance of error, which otherwise might become as mischievous as widespread. Caution is more especially necessary in reference to operations which involve important issues either to the life or future health of patients ; and I venture with some diffidence to indicate one or two quicksands or dangers in the present state of gynecological science.

It is, unfortunately, in the very nature of things, that exaggerated or partial views should be entertained when a new idea or a fresh method of treatment is developed ; and mere enthusiasm often sways earnest men from one extreme to another. By way of illustration, I may point out that, when midwifery forceps became so perfected that in good hands they could be used in most cases with safety both to mother and child, and it became established that, as a rule, the use of instruments need not be deferred so long as heretofore—some zealous practitioners began to throw aside all precautions, to trust as little as possible to nature, and, by way of saving time, to have recourse to instrumental delivery more frequently than desirable. In like manner, one ingenious practitioner, struck by the way in which difficulty in the delivery of some head-presentations was overcome by version, actually proposed to turn in all cases of head-presentation, whenever the least delay occurred in the progress of natural labour, and the passages were sufficiently dilated.

In the department of women's diseases there has from time to time been a tendency to give prominence to some single pathological condition, in such way as to shut out, or at least obscure, other and perhaps equally important affections of the uterus and its appendages. We have had an epoch in which the ovary was assumed to be the prime factor in all uterine ailments ; we have had a period when inflammation and ulceration of the os and cervix uteri held the fore-

most place in uterine pathology ; and now we are threatened with a reign of uterine displacements, in which the majority of symptoms of womb-derangement are attributed to flexions and versions of the organ ; and, influenced no doubt by current medical opinion, patients, as they present themselves in the consulting-room, appear stricken with an epidemic of displacement, and imagine that all their discomforts are caused by dislocations of the womb, just as, at one time, the sufferers from uterine symptoms generally believed themselves to have ulceration ; neither supposition, perhaps, being in accordance with the facts.

The promulgation of particular views in pathology, even if erroneous, would lead to little harm if it did not culminate in hurtful methods of treatment, or tend to lower our prestige in the eyes of the public and in those of our brethren who practise in other departments of our profession. But when theories carried into practice involve proceedings which may possibly be dangerous in their immediate or remote results, or which necessitate frequent vaginal examinations, great circumspection is required in their adoption.

Imagine what would be the result if the celebrated professor who first practised division of the cervix for dysmenorrhea and sterility were to find many imitators without his genius, who began extensively to incise the cervix in most cases of painful menstruation, or where pregnancy was desired ! Or picture what would result if it were generally believed that nearly all forms of uterine disorder could only be cured by the frequent repetition of some form of cauterization ; or, again, if a large body of medical practitioners were to become possessed of the single idea that uterine displacement was the root of evil in the majority of female ailments, and that pessaries of some kind were essential to cure both married and single women so suffering.

I would beg especially not to be understood as depreciating the labours of some of those eminent pioneers who have done so much to advance our knowledge of uterine disease. It would be in the last degree unjust not to acknowledge how much we are indebted to their conscientious labours ; and there is great temptation to give preponderance to subjects which have occupied so much attention, and have cost much pains in investigation. But I am anxious to guard against the acceptance of some single idea or theory which, if ridden as a hobby, may hinder the advance of a broader and more comprehensive uterine pathology, and perchance lead to meddlesome and mischievous methods of treatment. The mind preoccupied with a sole idea is apt to search only within the limits of that idea, and to overlook or ignore what may be more important, but beyond and outside it. In an experimental art like ours, practice goes through phases and fashions, in accordance with prevailing principles in pathology and therapeutics ; and we are not alone in this respect. The practice of physic has had its phases of bleeding, blistering, and antiphlogistics, followed by a diametrically opposite stimulating method. A

mercurial plan of treatment has had its day, and has been succeeded by an anti-mercurial plan, and so forth.

Scientific men are sometimes charged with being so conservative as to be unwilling to entertain any suggestions which are out of the beaten path. This seems to me a groundless charge, so far as our own profession is concerned. Its members show the greatest aptitude to receive fresh accretions to their resources, if what is new affords reasonable evidence of genuineness. The danger is, perhaps, in the opposite direction. The recent and rapid progress in the physical sciences has raised expectation too high, and has sometimes favoured a too ready acceptance of novelties, which later experience does not approve without undervaluing recent improvements.

It has seemed to me, in making a general survey of our ground, and weighing our present position, that the great impetus given of late years, by many admirable workers, to the progress of uterine surgery, has tended to throw the balance somewhat too much over to the surgical side of the scale, and that operative and mechanical methods of treatment have displaced somewhat unduly and hurtfully the medical and psychical considerations in uterine cases.

It is essential to the proper exercise of our art that, while we lend an attentive ear to every suggestion of improvement, in action we should be conservative in the truest sense of the term, particularly when interference may possibly do more harm than good. I need not recall to the initiated the dangers which beset operators in midwifery, and the reasons which induce the wise practitioner to abstain from interference except when the necessity is imperative. The current axioms about "meddlesome midwifery" are as true in our times as in former days. Experience also has abundantly proved that even minor operations on the unimpregnated uterus cannot be undertaken with the same immunity as like operations in external surgery. A simple incision, the removal of a polypus, an intra-uterine injection, the insertion of an intra-uterine pessary—has not infrequently been followed by grave symptoms, which, in some cases, have terminated in the death of the patient, or in the permanent maiming of the genital apparatus by peritonitis.

It is no uncommon experience for a young gynecologist to start full of ardour for operative procedures, which, he believes, will cut short the slower and more cautious methods of cure, but ere long he discovers that even slight operations cannot be performed without hazard; and if he have a conscientious regard for the welfare of his patients, he grows more conservative as he grows older. It is true, we have witnessed great achievements in gynecological surgery brought about by indomitable courage and infinite pains in the face of great perils. I know no more striking illustration of this than the success which our distinguished *confrère* Mr. Spencer Wells, and, following him, Dr. Thomas Keith, have attained in ovariectomy. But it must be remembered that this operation has been undertaken and perfected to avert the progress of a disease which ere long inevitably

terminated in death. The risk incurred bears a direct relation to the magnitude of the peril in which the patient stands before the operation; and there is no comparison admissible with hazardous operations which are undertaken for the alleviation of some minor ailment, or possibly for the cure of a woman who is barren, but otherwise in perfect health. While, therefore, the sagacious and prudent gynecologist should shrink from nothing which will promote the ultimate good of his patient, he should not readily be beguiled into what is new or adventurous, without sufficient proof of its necessity, efficacy, and reasonable security, and without well considering whether some lesser measure will not bring about the same result. Further, he should be conservative of his resources, in diagnosis as well as in treatment. He who, as a rule, employs the uterine sound without considering whether the whole circumstances are such as to afford *primâ facie* evidence that it is necessary to clear up some doubt, will certainly inflict a large amount of pain and annoyance on his patients, with a minimum of good results. The same observation applies in some degree to the use of the speculum; and without being bound by any slavish rule on the subject, I may go so far as to say that any method of treatment for uterine affections—always supposing it to be efficient—the more readily commends itself, if it do not entail too frequent examinations per vaginam.

This Society, consisting as it does of so many who are eminent as obstetric teachers and practitioners, may with propriety act as moderator, when new views are propounded on matters within its province. While it gives countenance and encouragement to all sound innovations, which combine improvement with comparative safety, it may assess, so to speak, their true value and importance, and its judicial decision will command respect, in proportion to the care and caution of its deliberations.

From this aspect I regard the position of President as one of high responsibility, and I look forward with some diffidence to the exercise of the trust you have confided to me. I must, however, rely on your forbearance, and hope that, by showing a strict impartiality, I may win your approval; and, at the same time, guide the debates to a wise decision.

If the Society have already done much, there is yet ample work in store for it. Besides accumulating the valuable records of experience, there are numerous interesting subjects of inquiry which might make the reputation of Fellows who have aptitude for them. There are yet extensive mines of investigation, which have been but very partially worked, and which would well repay time expended on them. Take, for example, the diseases of the placenta. Notwithstanding what Simpson, Barnes, and others have done, much remains yet to be learned. The whole subject of intra-uterine death, comprising the pathology, causes, and prevention of abortion, and of the death of the fetus in the latter periods of pregnancy, is one full of interest, and offers a field for investigation of great extent.

Take, again, the subject of septicemia, or blood-poisoning ; how little we know as yet beyond what is conjectural ; how little we know of the nature or of the origin of the poison itself, and yet how serious we know its results to be, and how helpless the wisest of us are to cope with it when extensively developed. Surely something might be done by careful experiment and chemical analysis combined to elucidate the subject and aid its prevention, or mitigate its effects.

One object of great practical interest on which further information is required, has been confided to a committee of able observers, nominated by the Society, to investigate and report upon. I allude to the subject of transfusion. The report is, I understand, nearly ready, and when it is presented it may be desirable to set apart an evening for its discussion, so that the opinions and experience of Fellows may be elicited on the general question of transfusion, and its value in actual practice.

One of your presidents has called attention to the comparatively small number of contributions to the Society on infantile pathology. I agree in thinking this is to be regretted. The diseases of young children are commonly regarded within the province of the obstetric physician, and their treatment forms so large and important a section of work in the practice of every family doctor, that their careful and constant study becomes desirable on every available opportunity. It is well known that, from certain structures and physiological peculiarities, children are subject to diseases which differ in many important respects from those of adults. Their pathological anatomy differs remarkably from that of adult patients. If attacked by the same disease as the adult, the common ailment will, in accordance with the tender age of the patient, be modified in its course, be attended by other symptoms and complications, and perhaps terminate in a different manner. Special modes of diagnosis have to be employed in investigating children's ailments, and special therapeutics employed in their treatment.

In view of the importance of this subject, I trust that Fellows may be persuaded to bring more contributions before the Society concerning infantile pathology, and that the records may be found in next year's *Transactions*.

OBSTETRICAL SOCIETY OF EDINBURGH.

Meeting, December 9th, 1874.

DR. MATTHEWS DUNCAN, *President, in the Chair.*

Fatal Case of Post-Partum Hemorrhage.

By JOHN CONNELL, M.D., Peebles.

Discussion on the Use of Perchloride of Iron.

Isabella R., a mill-girl, aged twenty, primipara, was confined of an illegitimate female child on the 24th of April last. She had been

leading a loose life for a considerable time, had been unable to work, and had been taking little or no food for a month previous to her confinement. Her mother died five years ago at the age of thirty-three, of uncontrollable hematemesis, with splenic enlargement.

I was first called to her at 3 A.M., and finding the os uteri but little dilated did not remain with her, or return till sent for again about eight. The head was then approaching the perineum, the membranes having ruptured a short time previously. Labour went on satisfactorily till during the last half-hour, when the head being unduly detained, I completed delivery with the short forceps at half-past nine.

The uterus was fairly contracted, and for a short time all appeared to be going well. It was noticeable, however, that at no time did she show signs of the pleasurable reaction commonly seen just after the birth of the child. Keeping my left hand on the uterus, I allowed a few minutes to elapse before passing my finger along the cord to feel the condition of the placenta.

The margin was presenting through the os, and I could feel a considerable flow of blood escaping by the side of it. Before I could introduce my hand further she suddenly exclaimed "Oh, what's this? I'm a gone woman!" and at the same time the placenta escaped, accompanied by a large quantity of florid blood, which was projected to near the foot of the bed. I at once used all possible means to arrest the hemorrhage, but though there was fair contraction of the uterus it still continued. Seeing the critical condition of the patient I sent for Dr. Ferguson, and with his consent (having previously injected cold water without avail) I introduced, about half an hour after delivery, three ounces of liq. ferri perchloridi, diluted with three times its bulk of water. The flow of blood ceased at once, and gave place to a blackish watery fluid, no further uterine contraction occurring.

At this time the pulse at the wrist was imperceptible, and the dependent parts of the body, chiefly the left arm and hand, and the left side of the head and neck, were livid.

I thought she was dead, but was comforted by the remembrance of what I had read of Dr. Barnes's success with the perchloride. After a short interval she rallied so far as to be able to swallow fluid food and brandy, which were freely administered by mouth and rectum. The pulse returned, and I began to speak to her confidently of recovery. She kept saying, however, that "she was a gone woman." For an hour and a half she seemed to be doing well, when, about 12.15, she suddenly threw herself round on her hands and knees, and expired within a few seconds.

No post-mortem examination was permitted.

I am aware that this case hardly raises the discussion of Dr. Barnes's treatment, as it proves little either for or against it. Knowing, however, that a strong hostility exists in some minds to the use

of the iron solution, I trust the members present will give their opinions freely. My own opinion is that the hemorrhagic diathesis was present in this case, because the uterus was as well contracted as we see it in three-fourths of all the cases that do well. Cessation of bleeding followed immediately on the injection, but the question in my mind was, whether the cold and irritating fluid did not add materially to the shock and collapse induced by the first flooding.

The sudden muscular exertion just before death doubtless hastened the event, if it did not directly cause it. There was no jactitation previously, though some red blood had begun again to issue from the vulva.

Dr. Barnes of course admits that there are cases where transfusion may be necessary, but here no time was given for it. Having carefully studied all that had been said as to the success of the iron treatment, I must say my faith got a shock from the result of this case. She probably did not die because of it, but at all events she died in spite of it.

Dr. RATTRAY had lately had a case of very severe post-partum flooding. When he was called to the patient she was livid, pulseless, and speechless. Under the bed was a pool of blood. By removing clots from the uterus, by the employment of pressure externally, and by the diligent use of ergot and brandy internally, the hemorrhage was checked, and the patient recovered.

Dr. MACDONALD feared that the discussion would not be a very productive one, as he thought that there were very few practitioners in the Edinburgh School who had made trial of the perchloride of iron. He had only seen one case in which he would have used it, but he did not have it with him at the time; this ended fatally, and, as a *dernier ressort*, he would have felt justified in its use. On another occasion when dealing with severe hemorrhage post-partum, he sent for the perchloride, but fortunately the bleeding ceased ere he could get it used. He had read the literature of the subject as dispassionately as he could, but was convinced that the balance of results is against the use of the perchloride. The ultimate results of the recorded cases which had been treated with the perchloride were certainly not encouraging; and seeing that the vast majority of bad flooding cases recover under the ordinary means of treatment, he felt driven to the belief that the use of the perchloride introduces new dangers of its own. Again, theoretically, it does not seem calculated to stop the bleeding after labour; the bleeding vessels are too large. It answered very well for serous oozing, and hemorrhage from small vessels, but it had not power enough to act on large ones. If again we follow Leopold and look upon the mucous membrane of the uterus as a huge lymphatic gland, in close connexion with the general lymphatic circulation, we can easily understand how septic diseases are set up by the putrid clots and the irritation of the mucous membrane caused by the perchloride. The clots found in the venous sinuses likewise could not fail to create great risk of

embolism. In making these remarks he was dealing with the subject generally; as regarded Dr. Connel's case, he wished it to be clearly understood that he passed no unfavourable criticism. Indeed, under such circumstances he would probably have done the same as Dr. Connel did. He would like to know whether ergotin had been tried by the Fellows in such cases; he had used it several times, injecting subcutaneously about four grains, with instant good effects. It had the advantage over ergot administered by the mouth, that it was independent of the aid of the weakened or obliterated assimilating power of the stomach.

Dr. BELL was at a loss to know on what principle perchloride of iron is used. Does it produce contraction? If not, it is very injurious, and surely led to embolism. He had always succeeded in checking post-partum hemorrhage by the ordinary means, and thought that, even if the patient survived the application of the perchloride, inflammation was sure to take place. He strongly objected to the practice.

Dr. T. G. BALFOUR agreed with Dr. Macdonald's remarks, except that reports tell us that the perchloride certainly does stop hemorrhage. He had used ergotin in hematemesis in a bad case, and there was no return of the bleeding.

Dr. MACDONALD explained that he considered perchloride of iron an unsuitable hemostatic for post-partum cases. No doubt it might stop hemorrhage, but it probably owed its capability to do so to its power as a stimulant of uterine contraction.

Dr. SIMPSON did not think that, on the evidence hitherto published, the use of perchloride of iron should be set aside; he would be sorry to think that he would not be justified in using it in a suitable case. He had once used it in a case he was called to in consultation, but too late, as the patient was just sinking; but he was glad to think that the perchloride might possibly arrest the flooding, if applied a little sooner. He did not consider the theoretical reasoning against it sound, because the stimulant action would tend to make the uterus contract, and thus the styptic power of the remedy would be applied to a smaller placental surface, and to smaller orifices. Moreover, it is a grand antiseptic; there is a great tendency to septic absorption in these cases, but least of all in cases where the perchloride has been used; hence, though his own experience had not furnished proof of its value, he would like to see further trial made of it in suitable cases. In estimating the worth of the remedy, the difficulty lay in knowing whether the patient whom it seemed to save would have died had it not been used. He thought Dr. Connel's case showed that it did arrest hemorrhage for a time, which was just what Barnes claimed for it. The death was probably caused by the hemorrhage, slight though it was, which had recurred.

Dr. KEILLER thought that, without trying the remedy in suitable cases, we ought not to decide either for or against Dr. Barnes's mode

of treatment. He had not tried it, simply because he had not met with a case which required it. He thought too much was often done in these cases, and that we could generally save our patients if we only set ourselves to husband the little stock of life which was left in them. He had seen many pulseless and apparently dying women recover without having recourse to any so-called *styptic* measures, and, judging from his past experience in the management of post-partum hemorrhage cases, he failed to see the necessity for having recourse to the injection of the perchloride of iron as recommended by Dr. Barnes, and as practised in so many recently published cases. He could not help entertaining his very strong conviction as to undue credit being often given to the means which may happen to be used in restraining flooding immediately or soon after parturition, and he believed that fussy interference in such cases should be studiously avoided while keeping our patients alive, which could be done more quietly, and be held more safely, by *securing uterine contraction* through pressure and other well-known means, apart from transfusion or perchloride injection, both of which had often been lauded as having saved lives which they may in reality have tended to sacrifice. He advised external compression, with internal manipulation of the cervix and interior of uterus. The uterus, however, was sometimes compressed too much; this was liable to cause the detachment of an embolus, which may possibly have been the cause of death in Dr. Connel's case. He indeed, in consultation with Dr. Niven, saw a fatal case last week with all the constitutional symptoms of extreme hemorrhage, although the uterus was firmly contracted. The death in this case he believed was due to embolism. He had used ergotin with apparent success on one occasion.

Dr. BELL said that it was the general practice, when he was a student in London, to inject vinegar in these cases: inflammation frequently followed.

On the motion of Dr. YOUNG, the discussion was adjourned.

Meeting, January 13th, 1875.

Adjourned Discussion on the Use of Perchloride of Iron.

Dr. PATTISON mentioned a case in which life had been saved by compression of the aorta in a bad case of post-partum hemorrhage, and another in which a grandmother, a mother, and a daughter had each died of hemorrhage after giving birth to her first child.

Dr. COGHILL reminded the Society that in hot climates, post-partum hemorrhage is very common. When he first went to China, he was told that most of the fatal cases of midwifery were due to this cause. He accordingly took precautions to prevent its occurrence in every case of labour which he attended. His method

was, (1) to empty the uterus as slowly as possible; (2) to follow up the contracting uterus with the hand, and to have the hand of an attendant always on it, until after the expulsion of the placenta; (3) to put a small padded saucer over the uterus, and a firm binder above it. In a large practice there, he had never lost a case.

Dr. CRAIG said that though the arguments of speakers had mostly been unfavourable to the perchloride, it had undoubtedly stopped the hemorrhage in Dr. Connel's case, while the fatal result could not be attributed to its use. He thought it should be used in suitable cases, and he would himself in a similar case do as Dr. Connel had done.

Dr. CARMICHAEL thought that perchloride of iron had been raised to far too high a position. The cases of post-partum hemorrhage could be divided into two classes:—(1) Those immediately controllable; (2) those which are uncontrollable for several hours. He doubted if the perchloride need ever be used if the ordinary measures were thoroughly carried out. Many old and experienced practitioners, among whom was the late Dr. Beattie of Dublin, had never seen a death in their own practice from post-partum hemorrhage. Besides, the perchloride must be injurious to the placental site, and mucous membrane, of the uterus. He had found great irritation produced by it on the nasal mucous membrane when used for epistaxis—probably the same thing happens in the uterus. He concluded that, as a *dernier ressort*, it might be justifiable to use it, but it had too often been employed unnecessarily. He had found irritation of the nipple a valuable aid in stopping hemorrhage after labour.

Dr. YOUNG said that, since the last meeting, he had had two severe cases of post-partum hemorrhage. He had seen many such cases, but never lost one. In forty years' practice his father had only lost one patient. He trusted to steady, firm pressure, maintained by the left hand over the fundus of the uterus, and administration of ergot and stimulants when necessary. In a case of severe hemorrhage yesterday, he stated that, while the patient was under chloroform, he removed several clots from the uterus, which with firm pressure stopped the hemorrhage. He thought that the risks incurred in the application of the perchloride were too great to justify its use, and he would require a more clear demonstration of its safety before he would admit it into his practice.

Dr. MATTHEWS DUNCAN said that Dr. Connel's interesting paper brought before them an example of one of the most awful events in medical practice, and was fitted and intended to elicit the views of the members of the Society as to the best means of averting this dire result—namely, death from post-partum hemorrhage. It would scarcely be a misrepresentation to say that Dr. Connel's intention was much more restricted, and aimed at eliciting opinions regarding the value of perchloride of iron as a hemostatic in post-partum hemorrhage—a remedy to which Dr. Barnes had succeeded in giving

the utmost degree of prominence. It was not a new remedy, but rather an old one, yet it had of recent years attracted as much attention as if it were entirely novel, and of undoubted and inestimable value. The remarks of Drs. Macdonald, Bell, Simpson, and Keiller, he regarded as of great value, and expressing most of what he had himself to say, but he would venture to give, in his own words, a few of his own reflections on this important practical subject.

When injection of perchloride of iron in solution was recently brought prominently before the profession, and on other occasions it was prematurely described in terms of injudicious laudation—"No woman now should die of post-partum hemorrhage," it was said. Unfortunately for the boastings, women had died from post-partum hemorrhage, apparently more than ever, and even when the vaunted remedies of perchloride of iron and transfusion—both declared to be inestimable and sovereign—had both been employed with skill. The journals had recently had more of these cases than he ever recollected having previously seen. This boasting was for him a bad omen. The best were always modest. He made no doubt that in this instance the boasting was from good motives; and a little boasting or confident speaking in private might be permitted, as tending to secure the confidence of patients, but it was altogether out of place in medical societies and medical journals. Medical history was full of the lamentable wrecks of boasted remedies, and even of such as had had solemn approval, like the *semper, ubique, et ab omnibus* of theologians; and medicine was now, he hoped, too far advanced for any new remedy to secure general confidence without being able to show satisfactory credentials better than the support of great names and clever hypotheses.

Every one who had seen much of post-partum hemorrhage, the not very rare cases of extreme and death-like prostration, with early and complete recovery, and that under all kinds of treatment, would on reflection easily understand what a slow and difficult matter it must be to establish the utility of a new remedy. The difficulty and slowness were greatly increased by the rarity of the cases of the worst form—that is, of really imminent danger of death. The recent copious shower of cases in the journals requiring perchloride of iron injection, and when life was supposed to be saved by the use of the remedy, was a very unsatisfactory shower. Dr. Duncan could not avoid making, in regard to these cases, the remark, which had been ably made already with a similar application by Dr. Keiller, that it was a pity that many of these poor women had not been simply left alone. He had no doubt of the justice of Dr. Keiller's remarks on the *nimia diligentia* of accoucheurs. In his own immediate practice he had never had a death from post-partum hemorrhage, but had had ample opportunities of confirming the remarks referred to. He had seen in consultation, and been otherwise connected with, many cases of death from post-partum hemorrhage. Then he might make a

curious remark, that his impression was, that within the last ten years he had known nearly as many deaths from the hemorrhage of fibrous tumours as from post-partum flooding. In some quarters fatal post-partum hemorrhage seemed to be common, and imminent danger of it still more so. This supposed commonness, he believed, was a result of unsoundness of judgment. In the Maternity Hospital here he believed a death from post-partum hemorrhage had never occurred.

The only remark he would make, having special reference to Dr. Connel's case, was one to which he attached much importance. It was that, in his (Dr. Duncan's) opinion, it was not an uncomplicated or frank case of death from post-partum hemorrhage. With a view to the statement of his opinion, he would name two important complications—namely, first, the tendency to dangerous or fatal swooning or syncope, apart from loss of blood, but in the cases under discussion evoked by parturition, and even a very slight loss, such as under ordinary circumstances would attract no special attention; and second, previous weakening by disease, loss of blood, or the sickness of pregnancy, predisposing to fatal syncope from slight losses of blood. It was only an opinion, yet one founded on considerable experience, that a majority of fatal cases of post-partum hemorrhage belonged to one or other of these two categories, and were not simple or frank cases of post-partum hemorrhage, where the loss caused death of women previously healthy and strong, by its great amount.

Dr. Duncan had a vivid recollection of two cases of the former complication. They occurred, as it happened, in healthy young women of splendid physique, and with abundant health, but with a tendency to alarming faintings. In one of them it occurred twice, in her two first deliveries, both under the influence of chloroform. The indications of impending death were so marked in these deliveries, and in the other case, that, with his sanction, the nurse went to call the husband and warn him of the almost certain direful event. In the first case referred to, there were several subsequent successful deliveries without chloroform, one of them with ether as an anesthetic. The loss in these three deliveries was inconsiderable in measured amount, and was soon completely stopped. Recovery took place under the influence of brandy, administered in moderate doses.

When Dr. Connel was reading his paper, Dr. Duncan was struck by the account of the suffering of the patient for many weeks before her confinement, from sickness and vomiting—a condition which must have greatly weakened her, and was described as doing so. The case was an example of the second complication, to which he had alluded, and it recalled to him several cases which he had seen or been consulted in. The first case of sudden death from post-partum hemorrhage which he had witnessed, was of this description. An elderly woman, the mother of a large family, suffered intensely from morning sickness before her confinement. The delivery was

easy and natural. There was little, very little, loss of blood, but it produced fainting. When he arrived no hemorrhage was going on, but a small clot was in the uterus. It was easily squeezed out, and the hemorrhage was stopped, but the woman died before it was possible to do anything further for her than administer brandy. Another case of this kind occurred in a patient, about whose frequent losses of blood during pregnancy he had been repeatedly consulted by a Morayshire practitioner. He recommended the induction of premature labour, but it was delayed and delayed, and at last labour supervened. The delivery was natural, and all was right till after the woman was bound up, and the practitioner had left the room. The nurse, observing a little discharge of blood, recalled the doctor, whose efforts, however, proved vain. In this case he had received two telegrams in an inverted order. The first was, "Mrs. L. is dead." The second was to the effect—"Come by first train to Mrs. L.!" Another case, in the sister of an esteemed medical brother he need not mention, for it had a very close resemblance to that last described. It was among this second class of cases that he would place the case of Dr. Connel. No doubt a great part of the cases of grave post-partum hemorrhage were uncomplicated, and it was his belief that a very great majority of such cases got well completely, or merely suffered subsequently from more or less permanent anemia. It was a very common thing to hear accoucheurs talk of cases of tremendous loss with no permanent evil results. It was his experience that in most fatal cases little blood—in measured amount—was lost. He very well remembered a case to which he was called by Dr. Craig of Ratho many years ago. About 7 A.M. there had been a considerable loss of blood at the commencement of labour, and before the arrival of Dr. Craig, who found the patient anemic, and feeling faint. Dr. Duncan reached the patient soon after noon. The patient was spontaneously delivered about 5 P.M. From the time of Dr. Craig's arrival till delivery no blood was lost, and the patient had recovered entirely from the feelings and indications of faintness. Danger was anticipated from swooning after confinement. When the baby was born, the mother triumphantly declared herself safe and feeling well. The placenta came away as in an ordinary case, and with a loss trifling in measured amount, certainly not above three ounces. The patient was still well; but soon she swooned and swooned again, and died about an hour after the birth of the child, in spite of our best efforts to maintain life.

Whether the post-partum loss was complicated or not, it was supremely desirable to have means of quickly stopping it, and the question of the value of perchloride of iron, which Dr. Connel raised, was one of great interest. Dr. Duncan was sure that all would be delighted if the sanguine anticipations of Dr. Barnes were realized, for in the treatment of such cases the arrest of the bleeding was the primary, though not the only, indication. Some practitioners quite forgot this, as he could testify from experience, having found

cases treated by the means of arresting hemorrhage after it had long quite ceased, and while only other indications remained to be fulfilled.

The flooding whose arrestment we were now considering was not from small vessels or an oozing surface, not from any source of spurious post-partum flooding—a kind which was not very rare—but from large vessels, the open sinuses on the surface to which the placenta had recently been adhering. It was the arrestment by a styptic of bleeding from large vessels that we were asked to admit. The arrestment was generally described as the result of a styptic action of the remedy, clots in the sinuses being produced.

Before considering the arrestment of ordinary post-partum flooding by a styptic such as perchloride of iron, he would say a few words as to the styptic action of this remedy in ordinary bleedings from small vessels. Such were often grave and dangerous. Among them he might mention bleeding post-partum from the lacerated cervix uteri, from the lacerated perineum, from the gums after tooth-extraction, from leech-bites. In such cases as these, styptics were sometimes efficacious, but every practitioner knew how frequently they were useless. Perchloride of iron had been often used in vain to arrest such comparatively slight bleedings, and it was to be remarked, that success in such cases might far more naturally be expected from its styptic action than in cases of ordinary post-partum flooding.

Dr. Duncan fancied that surgeons would not expect an efficient styptic action from perchloride of iron in bleeding from such an anatomical source as that of post-partum flooding; but truly they had no bleedings closely analogous to deal with. The nearest to it—which he knew well—was the copious oozing from the stump of a lupus mass excised from the pudenda, or of a malignant tumour removed from the same part, or of a cauliflower excrescence.

Now in many such cases in which he had used perchloride of iron, he had found its styptic virtues to be of no avail. It was only in some that it appeared to be followed by a diminution of hemorrhage.

In gynecological practice he had found this styptic, used locally, to be very valuable in cases of metrorrhagia, especially where there was a uterine fibroid causing it or keeping it up. In some analogous obstetrical cases he had found it of use, as in continued bloody losses after abortion. He remembered well a very successful application of this drug many years ago, when the remedy was little heard of. He was called to Dumfriesshire, by Dr. Borthwick, to a young woman who had recently aborted in an early month, and who, after continuously losing blood for many days, was, when he saw her, very exsanguine and in a most alarming and dangerous condition. The solution of perchloride of iron, locally applied, arrested the loss and apparently saved life.

The bearing of these remarks was evident—namely, that he did

not, from his knowledge and experience in the use of the perchloride, expect much from its styptic action in post-partum flooding. But our knowledge of the matter was not nearly sufficient for the settlement of it by *à priori* reasoning. Direct experience must be the criterion. Besides, he had said nothing of the possible, nay, probable, indirect action of the remedy by inducing uterine contraction. Ordinary post-partum flooding was not of a kind on which he would expect any mere styptic to have much effect. Till now styptics had never been relied on, and he, judging from all he knew or had read, did not place reliance on them even now.

Uterine contraction, and this alone, was the paramount means of arresting uterine hemorrhage that we could call into action. To call this into action by physical irritation of the muscular fibres of the uterus by kneading and compression, was the quickest and most efficient remedy. A slower means was a dose of ergot, and this had been said to have its action much accelerated by using ergotin instead of ergot, and injecting it hypodermically. These were, in his opinion, worth all other remedies combined, and all he had read of the perchloride of iron injection did not make him think it so useful as kneading and compression of the uterus, and ergot administered internally. No doubt we were now always hearing and reading of cases where the injection was said certainly to have saved life; but he did not admit the truth of this. It might be true or it might not. There was no way of proving the positive, for every one of experience in losses of blood, whether post-partum, or under other circumstances, knew very well that if the patient only survived the arrest of the hemorrhage, such a patient had a good chance of altogether surviving, however alarming and excessive the anemia and faintness were. He would add that, when the bleeding was stopped, such cases seemed to get on best when almost completely let alone, or when a little brandy was given.

It was as much from reading the cases of so-called success as those of failure, that he had been unable to arrive at a favourable conclusion as to the utility of the iron injection. It was well known that some eminent men—especially Snow Beck—strongly opposed its use, and cited cases where the remedy had apparently caused great evil. But Dr. Duncan did not think these histories sufficient to deter the opposite party, who believed in the value of the remedy, from still farther experimenting with it, and attempting to realize their sanguine and generous hopes.

For his own part, he said, both theory and extensive experience led him to rely for hemostasis in these desperate cases, chiefly though not exclusively, on uterine contraction. To induce and maintain uterine contraction, he would meantime continue to prefer kneading and compression of the uterus, and ergot of rye or ergotin hypodermically used. Not till after these had failed, and till he felt willing to try a doubtful experiment, would he, and then only, reluctantly resort to iron injection. If he ever did this, he would look for advan-

tage from the injection acting as an excitement of muscular contraction, not as a local styptic.

Dr. KEILLER remarked, that he would be sorry if anything he said at the last meeting were taken as a censure on Dr. Connel; he had meant nothing of the kind. He knew Dr. Connel too well to believe that he would be injudicious in his treatment of any case. The Society had good reason to congratulate Dr. Connel on his being the first to bring prominently forward a case so specially calculated, not only to provoke the incidental discussion which took place at the last meeting, but to induce the President to favour the Society on the present occasion with the carefully considered communication which he had just read. He (Dr. Keiller) quite agreed with Dr. Duncan in the main, and especially in regard to the difficulty of believing that cases of post-partum hemorrhage necessitating any such interference were so common as had been recently reported. He thought that the multiplication of such cases in the journals was likely to do mischief, and the bolstering up of a doubtful remedy did much harm to young and inexperienced practitioners, who were only too liable to call any floodings they met with cases of severe post-partum hemorrhage. He had seen many cases where the danger was gone, and yet the practitioner was still hard at work, trying to stop a hemorrhage which had ceased—he had done it himself when young. The gushes and clots which frighten inexperienced practitioners rather prove that the uterus is contracting, which is the true remedy, and therefore the object to be aimed at. He could not recall a fatal case in his own practice. His method of treatment was to seize the uterus from the outside in the one hand, pass the other hand into the vagina, and spread his fingers out round the walls of the uterus and cervix (the hand not being put into the uterus itself), so as to have the uterine walls, and therefore the uterine vessels, completely under the control of judiciously applied compression. This measure he had found a very efficient one. He was of opinion, that many of the reported fatal—or supposed nearly fatal—cases would have recovered, had they been so treated. In abortion cases, and in many cases of cancerous erosion, and other local conditions, giving rise to hemorrhagic discharges, he had used the perchloride of iron, and had found it to answer admirably, but here the dangers to be apprehended from its use were not likely to occur. He believed in its value as a styptic, but not in post-partum flooding, which could be checked quite well without the injection of perchloride of iron as recommended and practised by Dr. Barnes and others, who deem it necessary in such cases. As an antiseptic and most useful corrugant in uterine complaints, he frequently used it.

Dr. CONNEL in reply said, that he was much gratified with the discussion which had taken place. His paper was merely intended as a text for others to preach on. The objections which had been raised to the use of perchloride were reducible to two classes: (1) that it was useless; (2) that it was worse than useless. These objec-

tions seemed to be held by the great majority of the Fellows who had spoken, and the unanimity here against the practice was as remarkable as the almost unanimous deliverance in favour of it in the London Society's discussion. In view of this diversity, he could scarcely think the matter was yet settled. Since the last meeting he had tried the following experiment:—An artery was allowed to bleed into a small saucer containing a mixture of two parts liq. ferri perchlor., and one of water. This mixture was seen to convert almost instantaneously six or eight times its bulk of blood into a tough, hard clot. Now, he could understand how, with a patient in the horizontal position, such a clot might act as an efficient styptic, especially along with external pressure and support. Again, the clot was antiseptic, for he had kept a portion of it in a water-bath, at a temperature of 103° Fahr., in contact with some placental blood (kept from coagulating by means of a little alkali), and there was no decomposition for nearly a fortnight. Another portion of the same clot was put loosely into a tube, and a stream of tepid water allowed to percolate over it. No part of the clot was washed off, but the whole was rounded into a glue-like mass, and gradually dissolved. This seemed rather to negative the probability of embolism or septicemia. Again, he had seen very strong perchloride, with glycerine, used in a case of abortion, with the effect of strongly corrugating the cervix and vagina, and without the least appearance of inflammation or purulent discharge. Death from flooding would still occur in spite of all means to arrest it; and though he did not return from the discussion with greatly increased confidence, still it was evident, he would not be condemned for omitting this treatment in any future case.

OBSTETRICAL SOCIETY OF DUBLIN.

Meeting, January 9th, 1875.

LOMBE ATTHILL, M.D., *President, in the Chair.*

A Report of the Rotunda Lying-in Hospital for the year 1874.

By GEORGE JOHNSTON, M.D., F.K. and Q.C.P., Master of the Hospital.

GENTLEMEN,—The sixth year of my mastership having come to a close, I consider it incumbent upon me to continue to render my annual account of the state of the hospital.

And in doing so, I beg leave to impress upon your minds that I have no theory of my own to promulgate. The only object I have is that, by giving an accurate and faithful detail of the occurrences which took place in the hospital, a fair conclusion may be arrived at as to whether a large maternity is as safe, if not safer, for those

seeking its advantages, than if they were confined in their own homes, or elsewhere.

In the first instance, I have every reason to be thankful in being able to say that our sanitary state has been so much improved during the past year, over any of the preceding ones, that, although there has been a greater number of deliveries during the period, the mortality is less than half what it was the year before.

Thus, if we compare the list of previous years with the past one, we find that in the year ending—

Nov. 5th, 1869, there were 1159 deliveries, and 25 deaths from all causes.

„	1870	„	1087	„	27	„
„	1871	„	1161	„	33	„
„	1872	„	1193	„	20	„
„	1873	„	1191	„	32	„
„	1874	„	1236	„	15	„

And this diminution in the number of deaths, notwithstanding the great prevalence of zymotic sickness of every kind—viz., scarlatina, rubeola, typhus and typhoid fever, erysipelas, &c., outside the hospital—is remarkable, more particularly when we take into consideration the various circumstances of the individuals, or the acute complaints they were suffering from either at the time of their admission, or which made their appearance shortly after their confinement. For instance, we had 47 cases of fretting from seduction; 7, deserted by husband; 3, ill treated by husband; 3, husband died shortly before their coming in; 20, extreme delicacy of health, and, of course, very susceptible of puerperal complications; 44, acute bronchitis; 3, jaundice; 1, gastritis; 5, convulsions; 2, epilepsy; 5, mania, 1 of which ended in apoplexy; 2, phlegmasia; 1, phlebitis; 13, peritonitis; 1, pyemia; 4, syphilis; 1, lacerated wound over sacrum, extending into right labium; 2, fever; 1, typhus; 1, typhoid; 2, diarrhea; 2, erysipelas; 2, rubeola; 15, scarlatina; 5, rheumatism.

Thus showing we were not exempt from the usual dangers and difficulties attendant on a large maternity, particularly an institution such as ours, whose doors are open to every one, without either note of admission or recommendation (the only passport required being that they stand in need of our assistance).

This low death-rate, I may say, is, in a great measure, attributable to the strict attention to cleanliness that is observed, and in having a constant current of external air permeating through the wards and corridors, thereby diluting the atmosphere (hospital if you will) with such an amount of pure air as to render the “poison” (if any) that may exist perfectly innocuous.

This purity of atmosphere and absence of any hospital odour has been constantly observed by very many visitors, medical and otherwise, who, after having gone round and examined the different wards,

have recorded their testimony in the book kept for that purpose, thus corroborating the truthfulness of my statement.

Besides which, I must add, the practice we now adopt of interfering, to prevent the labour being protracted, not only saves the lives of many children which would otherwise be destroyed, but also the mother from the evil consequences we know to have arisen from exhaustion, and the long-continued pressure on the soft parts, engendering sloughing of the vagina, peritonitis, or pyemia.

During the year ending 5th November, 1874,

1236 patients were delivered in the hospital.

153 " " at their own homes.

254 " were treated in the wards for female complaints.

4927 " were prescribed for at the dispensary, and one-half of which were treated for diseases of the womb in the gynecological department, making
in all

6570 patients relieved during the year.

Of the 1236 patients delivered in the hospital, 997 were purely natural labour—*i.e.*, the labour terminated within twenty-four hours, the head presented, and the child was born by the natural efforts.

In 40 instances the labour lasted over twenty-four hours. The greater number were cases which had been under the care of practitioners, or midwives, outside, who, finding them going beyond their skill, sent them in.

There were 45 cases where the ovum was expelled within the sixth month of gestation. We had 23 cases of twin births. In 3 instances the child presented with the upper extremity, and 45 with the lower.

In 138 cases we deemed it advisable to employ the forceps. In no one instance was it necessary to use the perforator. Version was performed in 14 instances.

Seven patients were admitted with accidental hemorrhage; 6 with *placenta prævia*; there were 25 cases of post-partum hemorrhage, but mostly of a trivial character; the placenta was retained in 7 instances; prolapse of the funis occurred in 13 instances; we had 5 cases of convulsions; 2, epileptic; 5, mania, 1 of which died of apoplexy. Chloroform was used in labour 104 times.

We had 15 deaths from all causes, being an average of 1 in $82\frac{1}{3}$, 9 were of a zymotic type—*viz.*, 3 scarlatina, 3 peritonitis, 1 pyemia, 1 typhus, and 1 typhoid fever.

The 1st case of scarlatina was in a female aged twenty-two, a primipara, seduced; was confined of a boy after a natural labour of fourteen hours, one of which occupied the second stage; placenta expelled in ten minutes; no P. P. H.* Scarlatina symptoms

* Post-partum hemorrhage.

showed themselves in thirty-nine hours after delivery ; throat became greatly congested ; she died on the third day of the attack.

The next case, aged twenty-six, was confined of a boy, first child, living, after a natural labour of seven hours, second stage occupying three-quarters of an hour ; placenta expelled in fifteen minutes ; no P. P. H. It was remarked at the time that her face and neck presented a flushed appearance, with the eyes somewhat suffused. The disease showed itself distinctly in forty-one hours. Some peritoneal symptoms appeared on the ninth day, and she died on the thirteenth after confinement.

The third case, also a primipara, aged thirty-one, innupta ; her labour was tedious, twenty-seven hours' duration, owing to early rupture of the membranes ; the os was slow in dilating ; we had to deliver her with a forceps of a girl, living ; third stage lasted only five minutes ; no P. P. H. ; fifty-one hours after seized with diarrhea ; eyes suffused ; the skin assumed a dusky hue ; pulse 128 ; muttering inarticulately ; rash appeared the following day. Ascertained that she had been drinking hard from the time she found she was pregnant, say for 7 months. She rapidly sank, and died on the second day after the diarrhea appeared. No uterine or peritoneal symptoms whatever.

The first case of peritonitis was in a woman, aged twenty-eight, her first pregnancy ; admitted in a state of great delicacy of health ; deeply scarred with small-pox, which destroyed one eye ; she was confined of a putrid child (boy) after a natural labour of thirteen hours, the second stage occupying three hours ; placenta expelled in ten minutes ; no P. P. H. Symptoms of peritonitis set in the following morning, fifteen hours after confinement, which gradually increased, and she sank on the sixth day.

The second was also a primipara, aged thirty, a case of *seduction* ; found great difficulty in getting her to reply to any questions ; fretting greatly ; she was confined of a boy, dead, after a natural labour of 10 hours ; second stage of only 1 hour's duration ; placenta expelled in 5 minutes : no P. P. H. Peritoneal symptoms developed themselves on the fifth day, and she sank in 3 days after.

The third, a case of peritonitis, with pyemia, occurred in a patient, aged twenty-one, her first labour, which lasted 30 hours. There was great delay in the first stage, the membranes having been ruptured early, for which she was treated. When the os was $\frac{2}{3}$ ths dilated she was put under chloroform, and delivered with the forceps of a girl, weight 7 lbs. 6 ozs., which lived ; placenta was expelled in 8 minutes ; no P. P. H. She went on well till the sixth day, when peritoneal symptoms set in, and she died on the third day after the attack.

At post-mortem examination the os was not more fissured than under ordinary circumstances, but a separation of the symphysis pubis was discovered with purulent deposit.

Pyemia occurred once, in a primipara, aged twenty-five ; her labour was slow in the first stage, 18½ hours, the second lasting 1½ hours ;

she gave birth to a girl, 7 lbs. 12 ozs., by the natural efforts; placenta was expelled in 10 minutes; no P. P. H. The following day her pulse was found very weak and quick; thermometer, 107° ; no abdominal tenderness or tympany. On the second she was found in a state of collapse; pyemic patches over back of hand and fingers, forearm, and right shoulder. She died on the fourth day after confinement.

Typhoid.—This case, aged thirty-one, her seventh pregnancy; admitted in a very weak state from accidental hemorrhage, which had commenced some weeks previously; suffering also from bronchitis, from which she has been suffering for the last month; she gave birth to a male child—weight 6 lbs. 12 ozs., delicate—after a natural labour of two hours; second stage, $\frac{1}{4}$ hour; no P. P. hemorrhage. On the fourth day diarrhea, with low fever set in, from which she sank on the third day of the attack.

Typhus Fever.—This case, aged thirty, her second pregnancy, had been ill in fever for the last fortnight; admitted with pulse 130; tongue furred; came in at night, so we could not send her to the Fever Hospital; her labour lasted only 6 hours; $\frac{3}{4}$ hour in the second stage; gave birth to a boy by the natural efforts—weight 5 lbs. 4 ozs.—which lived. Only complained of extreme weakness. Her strength was supported, but she never rallied, and sank on the fourth day.

Six were of an accidental nature (if I may so say)—*i.e.*, were not zymotic.

One was a case of complete *placenta prævia* in her eleventh pregnancy, aged forty; admitted in a state of extreme exhaustion; os found high up, $\frac{1}{5}$ th dilated; No. 1 Barnes' dilator was introduced, and, after two hours, No. 3 was passed; in half an hour the os was found fully dilated, the hand could be passed readily, version was performed, and a boy was extracted alive, weighing 6 lbs. 10 ozs. (lived); the placenta followed immediately, but the draining could not be restrained; we were about performing transfusion, but before arrangements could be made she died. Post-mortem examination showed a laceration of the vagina into the cervix of fully 3 inches.

One, a case of *apoplexy*, aged twenty-four; first pregnancy; her labour was of 18 hours' duration, but slow in the second stage, head being arrested in the cavity for 5 hours; we were obliged to assist the delivery with the forceps; placenta was expelled in 5 minutes; no P. P. H.; went on well till 5 P.M. of the fourth day, when violent mania set in, attributed to disappointment at her friends not coming to see her; her screeching and violence were so great we found it necessary to put her under the influence of chloroform before quiet could be restored. The following day she was more tranquil; eyes still suffused. 5 P.M.—Perfectly rational, and continued so till the following day, when she was attacked with sickness of stomach; suffusion of eyes increased. She fell into a state of coma, from which she never rallied, and died on the third day from the attack.

One, *convulsions*, a young woman, aged eighteen; seduced; first pregnancy; brought in in convulsions, which commenced twelve hours before admission, during which time she had seven fits; os barely would admit the finger. She was kept under the influence of chloroform; os gradually dilated, when a breech was found presenting, and was readily extracted; a second, also breech, was removed; placenta expelled in ten minutes; some P. P. H., requiring cold injections. On the third day, when consciousness returned, she began to fret extremely; complained shortly after of tenderness of abdomen: all the symptoms of peritonitis set in; she became maniacal on the sixth day, and sank two days after.

One, *bronchitis*, a young woman, aged twenty-two, a primipara; admitted with acute bronchitis, which she had been labouring under for the last fortnight; great dyspnea, in consequence of which her labour had to be assisted with the forceps; placenta expelled in fifteen minutes; no P. P. H. She gradually sank on the twelfth day after her confinement.

Post-mortem Examination.—The uterus was found well contracted; no peritonitis.

One, *sloughing of vagina* occurred in a delicate little creature, suffering from cold caught a fortnight before, aged twenty-one; primipara; her labour was tedious in the first stage, waters having escaped twenty-six hours; the usual means were adopted, when the os was found $\frac{2}{3}$ ths dilated and yielding. The head was above the brim, and a caput succedaneum formed, owing to disproportion. Parts becoming hot, she was put under chloroform. The forceps were applied, and the child, a boy—weight 8 lbs. 6 ozs.—extracted with difficulty; placenta was expelled in five minutes; no P. P. H. Diarrhea set in the day after; sloughing of the vagina and perineum followed; but, owing to extreme delicacy, her system could not bear up against it, and she gradually sank on the fourteenth day.

Hepatic and Renal Disease.—M. M., aged twenty; seduced; a primipara; admitted with phlegmasia of both legs; was delivered of a girl, living—weight 4 lbs. 4 ozs.—in the seventh month; labour natural, twelve hours' duration, second stage occupying four hours; placenta expelled in ten minutes; no P. P. H.; was very silent from the commencement; difficult to get her to answer questions; overlaid her child the day after; became maniacal on the fifth day; system gave way at once; became jaundiced on the sixth day, and she died on the seventh.

Post-mortem examination showed extensive disease of the liver, heart, and kidneys; uterus well contracted and healthy; peritoneum slightly congested; a small quantity of fluid in the uterine region.

There were 40 cases where the labour exceeded twenty-four hours; 34 in primiparæ, and 6 in pluriparæ. All of the primiparous patients were delivered with the forceps except 1, in which the child was expelled by the natural efforts. 3 pluriparous patients were delivered with the forceps; 1 by version; 2 by the natural efforts.

There were 45 cases of abortion—*i.e.*, the ovum was expelled at some period from the sixth week to the sixth month. 9 of these were primiparæ.

There were 51 cases of premature confinement—*viz.*, 31 in the seventh month, and 20 in the eighth month.

There were 24 cases where the mother had twins, 1 of which was at six months, her second pregnancy; she gave birth to 2 female children, weighing each 2 lbs. 8 ozs.; 1 lived for one hour, the second lived for thirty-nine hours. This case comes under the category of abortions. 1 mother, a primipara, innupta, who had convulsions, followed by mania, died. Of the 23 others, 7 were primiparæ, and 16 pluriparæ.

In 138 instances we deemed it advisable to employ the forceps in order to effect delivery, as well for the safety of the mother as to preserve the life of the child. Of the 138 cases 105 were primiparæ, who were delivered of 59 male children, and 46 female, 3 of the males being dead at birth; 97 lived, and 5 died.

Of the 3 males which were dead at birth, the 1st was a case of early rupture of the membranes (seventeen hours), together with narrowing of the antero-posterior diameter of the brim, where the head became arrested, parietal bones overlapping, pains strong; delivery was accomplished with some difficulty, the child could not be resuscitated; weight 7 lbs. 9 ozs. Mother was discharged well on the eighth day.

The 2nd, aged twenty, had been under the care of a practitioner (we were told) for two days before being brought to the hospital. On admission the head was found above the brim; waters escaped; large caput succedaneum formed; olive-coloured discharge; pains strong; os $\frac{4}{5}$ ths dilated. She was put under the influence of chloroform, and delivered after some difficulty. The child presented a great depression on the left frontal and parietal bones, owing to projection of the promontory of the sacrum; it was quite dead when born; weight 8 lbs. 4 ozs. Mother discharged on eighth day.

The 3rd, aged twenty-two; in labour twenty-four hours before being brought to hospital. On admission the membranes were found ruptured; waters escaped fourteen hours; the head was found above the brim; the os $\frac{2}{3}$ ths dilated; caput succedaneum formed. The usual means were adopted, and eventually delivery was accomplished with considerable difficulty. Child could not be resuscitated; weight 7 lbs. 8 ozs.; the head was greatly depressed in the transverse diameter. Mother discharged on eighth day.

Of the 2 male primiparous children which died, 1 was of an enormously obese woman, aged twenty-six, where the delay was in the first stage, owing to early rupture of the membranes ninety-nine hours previously; the head was found above the brim; suffering greatly. She was treated in the usual way, which rendered the os, which was $\frac{2}{3}$ ths dilated, capable of expansion; delivery effected with difficulty; the head was in the 2nd position; weight of child

9 lbs. ; it died on the seventh day ; mother was discharged well on the twelfth day.

The 2nd was a case, aged twenty-four, in which the membranes were ruptured for twelve hours ; the head descended low in the cavity, where it was arrested from inertia and disproportion ; child weighed 8 lbs. 4 ozs. ; died on the 4th day from cerebral congestion. Mother discharged on the 8th day.

Of the 46 female primiparous children, 43 lived, 1 of which was the 1st of twins, and 3 died, as follows :—

The 1st was in a case, aged twenty ; tedious in the 1st stage from rigidity, for which the usual treatment was adopted. As soon as the os was $\frac{3}{4}$ ths dilated, the membranes were ruptured, when the head descended to the outlet, where it was arrested from inertia ; no advance for 2 hours. She was delivered of a child, weighing 5 lbs. 14 ozs., which died on the 5th day from general delicacy. Mother recovered. Went out on the 7th day.

The 2nd was in a case, aged forty, innupta ; the delay was in the 2nd stage, which lasted five hours ; the head was arrested in the cavity, bones becoming greatly overlapped ; scalp tumour formed ; the child weighed 7 lbs. 6 ozs., was lively when born, but had convulsions on the morning of the 2nd day, and died in five hours. Mother recovered. Discharged on the 8th day.

The 3rd occurred in a case of acute bronchitis, aged twenty-five ; as she was suffering from great dyspnea, she was delivered when the os was $\frac{2}{3}$ ths dilated ; the child weighed 6 lbs. 5 ozs., which died on 3rd day, mother not being able to nurse it. She was at once put under treatment for the chest complaint.

The following morning Dr. H. Kennedy was kind enough to see her with me. She had a pulse 130 ; tongue dry, brown crust, sordes on teeth, dyspnea—in fact, all the symptoms of typhus fever. At noon she was again visited, when she was found crying ; and on being asked why she was doing so, she stated that she had been seduced—turned out by her parents ; she had nowhere to go, and did not know what would become of her ; that she had twice attempted suicide, but was prevented. We told her to make her mind easy, that we would befriend her, and get a home for her. From this she began to mend. She was sent to No. 11, chronic ward, on her 10th day, a week after which she took the place of wardmaid, where she continues ever since. This is a remarkable instance of the wonderful influence of the mind over the body.

Five mothers died, 1 of apoplexy, 1 of scarlatina, 1 of bronchitis, 1 of sloughing of the vagina, followed by peritonitis, and 1 of peritonitis.

Of the 33 pluriparæ, 22 were delivered of male children. 16 lived (1 of which was the first of twins) ; 5 were dead born, and 1 died. 11 female children were delivered ; 6 lived, 3 died, and 2 were dead at birth.

Of the 5 male children which were dead at birth :—

The first was a breech presentation, her seventh pregnancy ; there was great difficulty in bringing it through the brim, owing to the projection of the sacral promontory ; and, in order to deliver the head, we had to apply the forceps ; child weighed 7 lbs. 14 ozs. ; all her previous labours were instrumental. Mother recovered ; went out 6th day.

The 2nd was a case of *placenta prævia* (partial), eighth pregnancy, in the latter part of the 6th or beginning of the 7th month ; admitted in a very weak state, from loss of blood ; fortunately the os was dilatable, and we were able to deliver her in a short time. Mother recovered ; went out 6th day.

The 3rd had been under the care of a midwife for 2 days. Admitted with prolapse of the funis, which was pulseless ; her 10th pregnancy ; delivered of a boy, weighed 9 lbs. Mother recovered ; went out 5th day.

The 4th, aged twenty-five, her second pregnancy, was also a case of prolapse of funis, which was pulseless on admission ; delivered of a boy, 8 lbs. 11 ozs. Mother recovered ; went out 6th day.

The 5th, aged thirty-three, her sixth pregnancy ; waters had escaped sixty-three hours ; there was projection of the promontory of the sacrum, which prevented the head entering the brim ; os $\frac{2}{3}$ ths dilated ; pains strong. She was given a dose of ergot, put under chloroform, and delivered of a boy, 8 lbs. 1 oz., which presented a great depression on the left parietal bone. Mother recovered 8th day.

The 1 which died was in a case where the difficulty arose from deformity—pelvis simpliciter justo minor—aged twenty-seven, her 5th pregnancy ; waters had escaped 6 days ; the head was arrested at the brim ; os $\frac{2}{3}$ ths dilated when the forceps were applied ; child, a boy, weighed 5 lbs. 14 ozs. ; died in seventeen hours from cerebral congestion. Mother slow in convalescence, but was discharged well on the 22nd day.

Of the 3 female children which died :—

The 1st was a case of partial *placenta prævia*, admitted in the early part of the 7th month of her 6th pregnancy, in a state of great exhaustion from loss of blood ; os $\frac{2}{3}$ rds dilated ; head above the brim ; enabled to effect delivery of a child 3 lbs. 6 ozs., very weakly ; died in seventeen hours. Mother recovered ; was discharged well on her 8th day.

The 2nd was a footling, with the funis prolapsed, her 10th pregnancy ; had to deliver the head with the forceps ; child weighed 7 lbs. 12 ozs. ; it gasped four or five times, and the pulsation was maintained for fifteen minutes. Mother recovered, and discharged well on the 8th day.

The 3rd was also a case of prolapse of funis. Mother extremely delicate from jaundice, aged twenty-four, her 2nd pregnancy. Version was attempted, but, owing to the waters having escaped early (some twenty hours previously), causing the uterus to contract so firmly round the child, we did not consider it advisable to persevere, so

delivered with the forceps ; child weighed 5 lbs. 11 ozs. ; was born with sclerema of left side and face, neck, and arm, and extending down the sides ; died on the 6th day. In this case there was severe P. P. H., requiring the injection of the solution of the perchloride of iron, strength one to four. Mother recovered ; discharged 18th day well.

Of the 2 which were dead at birth :—

The 1st was in a case aged thirty, her seventh pregnancy ; the waters had escaped twenty hours ; head remained above the brim in labour twenty-five hours : os $\frac{4}{5}$ ths dilated ; olive-coloured discharge. Child weighed 7 lbs. 12 ozs. ; could not be resuscitated. Mother made a good convalescence.

The 2nd, a case, aged twenty-seven, her seventh pregnancy ; the waters had escaped seventeen hours. In this case the head descended into the cavity, where it was arrested ; after waiting 2 hours, child—weight 5 lbs. 4 ozs.—was delivered ; found to be hydrocephalic ; no pulsation in the cord at birth ; she had not felt the child for two days. Mother went on well, and was discharged the 9th day.

There were 42 of the foregoing forceps cases where we considered it advisable to interfere, and effect delivery before the os uteri was fully dilated, 34 being primiparæ and 8 pluriparæ.

Now, as this deviation from the ordinary rules for the application of the forceps is, I may say, a novelty, at least to most of my readers, many of whom may be sceptical as to the propriety of the practice, and may question its justifiability, I beg leave to repeat, nearly in the same words, what I stated in my last Report :—That having adopted this method now for the last three years, during which time we have delivered 113 such cases, we are more and more convinced every day of its great advantage in saving the lives of both mother and child. Of course, it is not without danger in unskilful hands, and should only be attempted by those who have thoroughly acquired that great delicacy of touch so essential in the obstetrician, and who have considerable experience in the use of the instrument ; with them, if properly and carefully performed, it is a perfectly safe proceeding. It may be necessary to state that in all such cases as we are speaking of, although the os is only dilated to the extent mentioned, it nevertheless must be *dilatable*. When the os is rigid we adopt the usual means for its relaxation previous to operating. By this practice we not only save the life of the child, but also we prevent much danger to, if not the death of, the mother, from the effects of the long-continued pressure on the soft parts, particularly when the membranes have been ruptured, and the liquor amnii escaped early in the labour, and, I may here say, that in every instance tried I have succeeded.

Of the 34 primiparæ, 22 had male children : 20 were alive at birth, and 2 were dead, 12 female children were born alive, 1 of whom died.

Causes of Interference.—The first, and most frequent, was from early

rupture of the membranes and the escape of the liquor amnii before the dilatation of the os, thereby allowing the fetal head to press injuriously on the soft parts of the mother. Of this there were 34 instances, 29 in primiparæ, 5 in pluriparæ.

Of the 29 primiparæ, the waters escaped as follows :—

In 1, 7 hours, she was delivered of a boy, still-born ; in 3, 12 hours, delivered of 2 males, 1 female, all living ; in 4, 14 hours, 3 males, 1 female, 1 of the males died ; in 2, 15 hours, 2 males, both living ; in 2, 18 hours, 1 male, 1 female, both living ; in 2, 19 hours, 1 male, 1 female, both living ; in 3, 20 hours, 2 males, 1 female, 1 of the males dead ; in 2, 21 hours, 2 females, both living ; in 1, 22 hours, male, dead ; in 1, 24 hours, male, lived ; in 2, 26 hours, males, both lived ; in 1, 27 hours, male, lived ; in 1, 29 hours, female, lived ; in 2, 30 hours, 1 male, 1 female, both living ; in 1, 40 hours, male, living ; in 1, 99 hours, male, living.

Of the 5 pluriparæ, the waters escaped as follows :—

In 1, 12 hours, male, living ; in 1, 13 hours, male, living ; in 1, 20 hours, female, dead ; in 1, 63 hours, male, living ; in 1, 6 days, male, died.

Thus will be seen that of the primiparæ, 23 boys were born, 3 of which were dead at birth, and 1 died ; in this case the waters had escaped 99 hours. And of the pluriparæ, 4 boys were born, 1 of which died, where the waters had escaped 6 days.

Secondly, in cases where, although the membranes were entire, the head descended immediately on the cervix, without any bag of waters intervening, and expanding it, thereby pressing as injuriously upon it as if the liquor amnii had escaped. There were 6 instances of this class ; 4 in primiparæ, giving birth to 2 boys and 2 girls ; and 2 pluriparæ, having 2 girls. All the children lived.

Thirdly, the cause of interference in 1 case was the prolapse of the funis, a primipara ; she was delivered of a girl, which lived.

Fourthly, a case of partial *placenta prævia* in the six month ; she was delivered of a girl, which lived for 17 hours ; weight 2 lbs 6 ozs.

Degree of Dilatation of the Os Uteri at the time of Operation.—In calculating the amount of expansion, as I mentioned in my last Report, 4 inches is assumed to be the full dilatation the os uteri undergoes before the fetal head can clear it. This is divided into 5 parts, $\frac{1}{5}$ th being about $\frac{1\frac{3}{16}}{5}$ ths of an inch ; $\frac{2}{5}$ ths being $1\frac{5}{8}$ inches ; $\frac{3}{5}$ ths being $1\frac{3}{8}$ inches ; and $\frac{4}{5}$ ths, $3\frac{9}{16}$ inches.

In 24 instances the delivery was effected when the os was only $\frac{2}{5}$ ths dilated, 19 being in primiparæ, and 5 pluriparæ. 18 of the primiparous children lived. 1 was dead-born, a male. The mother, aged twenty-one, in labour twenty-four hours before admission ; the waters had escaped fourteen hours. On examination the head was found above the brim, a caput succedaneum formed, owing to projection of the promontory of the sacrum ; she was put under chloroform, and delivery effected after considerable difficulty ; child, a male, weighed 7 lbs. 8 ozs. ; its head was deeply depressed in the

transverse diameter, owing to the deformity ; it could not be resuscitated. The mother made a good recovery.

Two mothers died. First, aged twenty-one, admitted in a state of great delicacy, owing to a cold caught a fortnight before ; the delay was owing to the waters having escaped twenty-six hours ; the head was found above the brim, caput succedaneum formed, parts hot. She was put under chloroform, and delivery effected with difficulty of a boy, which weighed 8 lbs. 6 ozs., lived ; the placenta was expelled in five minutes ; no P.P.H. Diarrhea set in the day after, sloughing of the vagina and perineum followed, and she sank on the sixth day.

The second, aged twenty-eight, admitted fretting. The membranes had ruptured, and the waters had escaped twenty hours before ; the head was arrested in the brim. The usual means to relax the os were had recourse to. She was put under chloroform, and delivered of a girl, which lived ; weight 7 lbs. 6 ozs. ; placenta was expelled in eight minutes ; no P.P.H. She appeared to be labouring under some distress of mind, although she went on well till the sixth day, when peritoneal symptoms set in, and she died in 3 days after.

Of the 5 pluriparæ, 2 had male children, and lived ; 3 had females, 2 of which lived, and 2 died in seventeen hours, the case of partial *placenta prævia* before recorded. All the mothers recovered.

Where the os was *three-fifths* dilated there were 12 instances, 11 being primiparæ, and 1 pluripara. Of the 11 primiparous children, 10 lived, and 1 was dead at birth ; all the mothers recovered. The child of the pluripara, was a male, alive at birth, weighed 5 lbs. 6 ozs., but died in five hours. In this case the waters had escaped 6 days. Mother recovered.

There were 5 instances where the os was $\frac{4}{5}$ ths dilated, 4 of which were primiparæ ; all the children lived, and mothers recovered. 1 pluripara, her seventh child, a female, dead at birth ; weight, 7 lbs. 12 ozs. The waters in this case had escaped twenty hours. Mother recovered.

Position of the Head at the Time of Operation.—The head was above the brim in 11 instances—6 primiparæ, 5 pluriparæ. Of the 6 primiparæ, 4 were delivered of male children, 2 of which lived, 1 died, 1 was dead at birth ; 2, of female children, both of which lived ; 1 mother died. Of the 5 pluriparæ, 2 were delivered of male children, 1 lived, and 1 was dead at birth ; 3 were delivered of female children, 1 lived, 1 died, and 1 was dead at birth. The mothers recovered.

In 17 instances the head was in the brim, 15 being primiparæ, and 2 pluriparæ. Of the 15 primiparæ, 9 were delivered of male children, 8 lived, and 1 died ; 6, of female children, all lived ; 1 mother died. Of the 2 pluriparæ, 1 was delivered of a male child, which died ; 1, of a female child, lived. Mothers recovered.

In 14 instances the head was in the cavity, 13 being primiparæ and 1 pluripara. Of the 13 primiparæ, 9 were delivered of male

children, all of which lived ; 4, female children, all lived. 1 pluripara, male child, lived ; mothers recovered.

Craniotomy had not to be performed once since the 2nd of September, 1873, a period of 15 months, during which time 1429 cases were delivered. Version had to be performed 14 times. There were 7 cases of accidental hemorrhage, and *placenta prævia* occurred in 5 instances, all pluriparæ.

Post-partum Hemorrhage.

As various opinions exist amongst obstetricians with regard to what may be actually called post-partum hemorrhage, I conceive that there ought to be, if possible, an accurate definition laid down as to what constitutes the complication.

Whether it should comprise every slight dash of blood or trickling, requiring merely steady pressure on the uterus, and the application of cold water externally, the pulse not being affected.

Or whether the amount of loss may be such as, in the opinion of the attendant, it may be considered necessary to inject cold water into the vagina or uterus, with the administration of ergot, wine, and perhaps an opiate, where still the pulse is but little affected.

Or lastly, should it be confined to cases where the flow is so great and the draining continues till the pulse becomes affected, there is fainting, and all the symptoms of great exhaustion, rendering it necessary to adopt some more powerful measures, such as strong astringents, stimulants, &c.

In order, therefore, to give a distinct idea of the hemorrhages that occurred after labour during the past year, I give the following classification :—

Degree of hemorrhage, requiring the administration of ergot and the application of cold water—1st. By napkins to the vulva and sacrum ; 2nd. By its injection into the vagina ; or, 3rd. Requiring the injection of the solution of perchloride of iron into the uterus.

Of the 27 cases, 9 occurred in primiparæ and 18 in pluriparæ. All were delivered by the natural efforts, with the exception of 4, 3 primiparæ and 1 pluripara, where the forceps had to be employed.

In the 14 cases which came under the 1st class of hemorrhage, 3 were in primiparæ and 11 in pluriparæ ; all were delivered by the natural efforts but 1, a primipara, who had to be delivered with the forceps. In this case it arose from mal-application of the binder, allowing clots to form ; when they were pressed off, the hemorrhage ceased, and the binder being readjusted, it did not recur.

In the 10 cases where the injection of cold water into the vagina was found necessary, 4 were primiparæ, 1 of which had to be delivered with the forceps ; 6 were pluriparæ, all of which were delivered naturally.

In the 3 cases requiring the injection of the solution of the perchloride of iron into the uterus, 2 were primiparæ ; 1 was delivered naturally, the strength of the solution used in this case was 1 in 8 ; 1

had to be delivered with the forceps, owing to delicacy of health, the strength of the solution used was 1 in 20. The pluriparous case was admitted labouring under a severe attack of jaundice, and extremely weak; had to deliver her with a forceps; the solution used in this case was 1 in 4. All the mothers recovered.

While on the subject of post-partum hemorrhage—particularly as the question of the tendency that “a short second stage” favours the occurrence of post-partum hemorrhage, of 684 cases where the 2nd stage did not exceed one hour, there were 14 cases of post-partum hemorrhage—viz., 7 of the 1st degree, merely requiring the cold water by napkin and steady pressure; 5 of the 2nd degree, where the cold, in addition, was applied by injection into the vagina; 2 of the third degree, requiring the injection into the uterus of the solution of perchloride of iron.

In 11 instances the placenta was retained; in 2 from morbid adhesions; 1 her 2nd, 1 her 11th pregnancy. 2 from irregular contraction—1 a primipara and 1 her 7th pregnancy; and 7 from inertia—2 primiparæ and 5 pluriparæ.

In the case of morbid adhesions, the placenta in both instances was removed in 35 minutes. In the 2 cases of irregular contraction, the placenta was removed—1 in 20 minutes, and the 2nd in forty-five minutes. In the 7 cases of inertia, 4 were pressed off in thirty-five minutes, and 3 in forty-five minutes. All the mothers recovered.

We cannot help thinking that irregular contraction of the uterus, in the majority of instances, arising from the person in attendance not following strictly the rules laid down of placing the hand over the fundus uteri at the time the head is passing through the vulva, and never removing it till the placenta is expelled and the binder adjusted. We impress on our pupils never to hurry the removal of the after-birth; but, simply by steady pressure in the axis of the brim, it will be expelled, in the great majority of instances, within 15 minutes, besides which it diminishes the liability to P. P. H.

Prolapse of the funis occurred in 12 instances during the year, 4 being in primiparæ and 8 in pluriparæ—viz., 4 the 2nd pregnancy, 1 the 4th, 1 the 9th, and 2 in their 10th pregnancy.

In 2 instances version was performed; both children saved; in 6 the forceps was employed—2 of the children were saved; in 2, footlings were extracted—1 child saved; and 2 were left to the natural efforts, the funis being prolapsed for some hours, and perfectly pulseless and cold on admission. Reduction of the prolapse was attempted in 3 instances, but not finding it satisfactory, proceeded to deliver at once. All the mothers recovered.

We had 5 cases of eclampsia during the year—3 in primiparæ, 1 her 2nd pregnancy, and 1 her 3rd.

The PRESIDENT.—Gentlemen, you have heard this valuable and important report—the sixth which Dr. Johnston has presented to us. It proves his proposition, that in a properly managed lying-in

hospital—in an hospital where that attention and supervision are given that he gives to the hospital under his charge—the deaths from puerperal causes may be reduced to a minimum as low as that which exists outside its walls. It appears that in over 1200 patients there were only seven deaths from puerperal causes (for we must distinguish deaths from puerperal causes from those occurring during the puerperal period), that is to say, a mortality about a half per cent. I do not think a more favourable report could be given by any practitioner in the kingdom, either in private or hospital practice. Dr. Johnston's success proves the judiciousness of his practice. At the same time, I think there are certain points in his practice that ought to be discussed ; prominent among these is the frequent use of the forceps. He has been so successful, however, that we are hardly prepared to condemn a practice in which the forceps is used once in every ten cases. Then, again, we find that he uses the forceps in a very large proportion of cases before the os is dilated, and, while the result is very favourable, I should be sorry to see that such a practice should be imitated by young and unskilled practitioners. A practice which may be quite safe for a skilful physician to carry out may be absolutely unsafe—nay, dangerous—for the unskilled to imitate, and I feel, therefore, that the practice referred to ought to be accepted with great reservation. Dr. Johnston advocates the use of the long double-curved forceps. I myself am in favour of them, but I am aware that some Dublin obstetricians prefer the use of the straight forceps.

Dr. CRONYN.—I have seen the long forceps used by Dr. Johnston in a case where, from the practice of midwifery which I was taught, and which I witnessed when an assistant at the Lying-in Hospital, I myself would have hesitated to use it. The os was not dilated to the size of a halfpenny ; it was dilatable, to be sure, and the patient was a primipara ; and I saw the instrument used by Dr. Johnston with the greatest apparent ease, and the delivery of a large child safely effected. I was much impressed by that operation. It was the first time I had seen the instrument used in this way, and I was inclined to think it very hazardous, but having seen with my own eyes, and tested with my finger the state of the parts, I confess I became a convert to the desirability of the operation.

Dr. HENRY KENNEDY.—Having seen the greater number of the cases of zymotic disease referred to by Dr. Johnston, I could not fail to be struck with the fact that the patients had brought the disease in with them. If a patient exhibits signs of sickness totally independent of what may be expected to arise in connexion with pregnancy, the probability is that the seeds of the disease had been implanted in her before she entered the hospital, and in such a case the act of delivery is enough to bring into life and develop the disease. The case referred to by Dr. Johnston, in which the mind exercised so great an influence on the physical condition of the patient, was very remarkable. She presented all the symptoms of typhus fever, but

when she found she was not to be neglected, but would be taken care of, the change that occurred was extraordinary, and her recovery was unusually rapid.

Dr. KIDD.—With reference to the use of the forceps before the os is fully dilated, I should like to know, did it ever happen that the forceps was applied and that it was found impossible to deliver the child?

Dr. JOHNSTON.—In no one instance did it ever fail. I had under my care within the last month a woman who came from North Wales to be confined. She had previously been delivered by perforation. I found that the head never entered the brim. I applied the forceps and delivered the child. You never saw a head more distorted, and I never expected the child would survive, yet it left the hospital with the mother, alive and well. I was prejudiced in favour of the straight forceps, but experience has satisfied me that the double-curved forceps is the more useful. One great advantage to be gained by it is, that once you get a grip it never fails. In another case the child presented an indentation on its head of an inch and a quarter long. I was nearly three-quarters of an hour effecting delivery. I never thought the child could survive, but it did.

Dr. KIDD.—This is one of the most interesting subjects we have had before us for some time. I hesitate to rise to speak to this paper at all; there is such an immense amount of matter in it, that I feel unable to grasp it at a first hearing. I have tried to deliver the head with the forceps before the os was fully dilated, and I have many times succeeded in doing so, but I have also succeeded in applying the forceps and been obliged to give up the use of it—but not from the slipping of the forceps. The point I meant to raise was not with respect to the forceps used, straight or curved, but as to the amount of force necessary to be used to draw the head out of an undilated os uteri. If the os be dilatable, we know that we can with a moderate amount of force effect delivery, but that is the very case in which it is not necessary to use any artificial means of delivery; but if the os be not dilatable—if the membranes have ruptured early, and you have a rigid os uteri—if you use the forceps there you may have to use an amount of force that will injure the patient. I believe Dr. Johnston said that where the os is rigid he makes use of ordinary means to counteract the rigidity. The great difficulty is to know the amount of rigidity that it is safe to attempt to overcome. I have seen much force used with the forceps, and more than I should like to use myself.

Dr. M'CLINTOCK.—The all-important and salient feature of Dr. Johnston's able and elaborate paper is the use of the forceps before the full dilatation of the os uteri, which practice would constitute an epoch in the history of midwifery. It opens a new era, it is so much at variance with the principles and maxims laid down by the great and standard authorities in obstetrics. But merely because it is a great innovation we are not to reject and repudiate it. Dr. Johnston

stands in this strong position, that he comes forward to advocate a practice he has largely tested, and of which he is able to give most gratifying results. I think Dr. Johnston's practice and results will go this far—viz., satisfactorily to demonstrate that the long forceps may be applied with perfect safety to the mother and the child under circumstances where we should formerly have shrunk from using them; and that is a great fact to establish. But with regard to the particular circumstances under which the forceps should be applied where the os is only partly dilated, there I think the rule should be laid down with great precision. We know that the first stage of labour may be prolonged to a great length with perfect safety and impunity to mother and child. If there be any rigidity of the os uteri I think the use of the forceps there may be a very hazardous proceeding, but in a case where the head is high up in the brim, where prolapsis of the funis takes place, or any emergency arises, such as convulsions or hemorrhage, endangering the safety of the mother and calling for delivery, it is a consolatory thing to know and feel that we may have recourse to the forceps. I can hardly myself conceive cases of simply tedious labour where the resort to this proceeding is justifiable. It is one thing to say the forceps has been used with safety by skilful and dexterous hands, but to lay down a rule that because a labour is tedious in the first stage, resort to the forceps may be had before the os is fully dilated, would be fraught with danger; and if such a practice were acted upon by young and inexperienced practitioners, it might be productive of very serious results.

Dr. JOHNSTON.—As to Dr. Kidd's observations with respect to the amount of force, and the yielding of the os, it is astonishing once you get the forceps in and begin to make gradual traction, in how short a time the os will become fully expanded. As to Dr. M'Clintock's remarks about using the forceps in the first stage, I have to say that I used it where there was early rupture of the membranes. Dr. M'Clintock says the first stage of labour is attended with very little danger. Now, in the first case which impressed my mind with the importance of the early use of the forceps we adopted the old rule. I ordered the patient a warm bath, and then came to a meeting of this Society. When I went back to the hospital the os was not fully dilated, and I delivered her with a forceps. On the third morning when we were going round, I found her in a state of collapse. The post-mortem examination showed that there was a complete separation of the cervix from the body of the uterus, and that circumstance induced me to make the bold step I have done, and I have had no reason to regret it. Dr. Churchill has seen some of these forceps cases, and I regret he is not here to give the Society the benefit of his opinion.

Obstetric Summary.

Pregnancy in a Uterus Unicornis.

Dr. Moldenbauer relates in detail the following interesting case ("Archiv für Gynæk.," Band vii. Heft 1, 1874). He was called to see a woman, aged twenty-seven, who had just been delivered of her first child; the placenta had not come away, and attempts to remove it had proved unsuccessful. On examination the cervix was high up, and the os only admitted two fingers: a mass was felt which was taken for the placenta: as there was no hemorrhage it was resolved to wait, and ergot was given. The next day the abdomen was swollen and peritonitis had set in; the patient was removed to the hospital, and died on the second day from diffuse peritonitis. At the autopsy there were marks of acute peritonitis, the uterus was large, and its upper part distended and forming a large tumour. On the right side the uterine appendages (tube, ovary, and ligament) were not to be found. The following was the relation of the parts found. The bladder was quite normal, the uterus on both sides present; the vagina was normal. The uterus was directed to the left side. The upper segment was distended into a thin walled sac; at the upper and back part of this an opening with torn margins, from which hung the remains of the membranes and a piece of the placenta. The uterine appendages on the left side showed traces of old inflammation; the Fallopian tube was bent so that its canal was impermeable. The left ovary was studded with small cysts; no recent corpus luteum could be found. On the right side the ligament of the ovary and the Fallopian tube were wanting, but in a fold of the peritoneum on the level of the external os and at the side a well-developed ovary was found with a recent corpus luteum; nearer the middle line a quite solid body was perceived, which on microscopical examination was found to be a rudimentary uterine horn. The case must be considered one of pregnancy in a one-horned uterus with arrested development of the other horn, and external migration of the the ovum; and rupture of the uterine walls in the second half of pregnancy.

Gynecic Summary.

Hematometra in a Uterus Bicornis—Complete Absence of the Vagina—Operation and Cure.

Dr. A. Bidder gives a detailed account of a case of hematometra in a uterus bicornis, with complete absence of the vagina, occurring in a girl aged seventeen-and-a-half years. For the last year she had suffered from pains recurring at four weeks' interval, but

there had been no discharge. On examining the patient no vaginal orifice existed; from the urethral orifice to the posterior commissure only a smooth mucous membrane was seen, with a slight depression in the middle. A finger passed into the uterus felt distinctly a catheter in the bladder, and apparently only separated by loose cellular tissue. About three metres from the anus the finger came upon a large elastic body, the size of the fist; this was in the site of the uterus and felt distinctly by bimanual examination; it was moveable; nothing like a cervix could be felt. As the diagnosis was not doubtful, the question was as to the closure or the absence of the vagina. It was determined to open up a passage to the uterus; the forefinger was placed in the depression and worked in the direction of the axis of the pelvis with a boring movement, separating the walls of the vagina; in places this was easily done; there was slight hemorrhage; at a depth of about three-and-a-half inches the tumour was reached; as no os could be felt, a small hole was made by the finger nail and a trocar pushed in; a thick tenacious treacly fluid escaped; the opening was then widened by the finger. The fluid was allowed to run away and no pressure was made upon the uterus, then the vagina was syringed out with tepid water. The patient did well, with the exception of a slight febrile attack upon the eighth day. Menstruation occurred normally shortly after. Later on the patient was again examined, the uterus was found large, soft and elastic to the left and below the fundus, a thick projection was felt about one-and-a-half inch long and three-quarter inch broad, which sprang directly from the uterine substance. It was probably the other horn of a uterus bicornis. No vaginal portion could be detected by the rectum, but from the lower part of the uterus a small cord-like vagina was recognised. The finger could only be passed up the vagina for about an inch; above this a contraction through which the sound passed. Attempts were made to dilate this contracted part by laminaria tents. When seen six months after this, the uterine condition was much the same; the vagina was still contracting, but the patient was menstruating naturally. The case is very interesting, both from its nature and the successful result from the treatment. These cases are somewhat rare; there can be no absolute certainty that the projection from the uterus was another horn, but the evidence is in favour of this. The slight reaction after the operation is remarkable.—*Berliner Klinische Wochenschr.*, No. 46, 1874.

News.

Recent Puerperal Epidemic at Coventry. By M. A. FENTON, M.D.,
Medical Officer of Health for Coventry.

As the epidemic of puerperal fever from which Coventry has just suffered has excited some discussion as to the contagious nature of

that disease, I think a short account of the epidemic may prove interesting. It is of importance, as it affords strong evidence in favour of the fever being extremely contagious. The first case occurred in November last. A woman, whose family was suffering from scarlet fever, was attacked by a mild form of the disease. A lying-in charity, which lends out to poor puerperal women bags of the linen requisite for such an occasion, and pays a midwife, and medical man, if required, for the patient, came into play in spreading the complaint. The bag of linen was returned to the matron, who placed it with another in a store. These bags were lent out again early in December, and both the women suffered from fever, one lightly, one very severely. There was no other source of infection. They were both attended by the midwife Ingram. The three following cases attended by Ingram on December 12th and 13th, were attacked with fever the day after delivery: two died on the fifth day, the third survived; but the medical man who was called to treat her carried the infection to the next parturient patient he attended, and this case proved fatal. Ingram's next case also proved fatal. She then (having received the coroner's warning) made arrangements with a medical man that she was to attend as usual, but not to deliver, or make vaginal examinations; she was to send for him when delivery was about to take place. This was done in one instance, the patient doing well; in the next case, the medical man disappointed her, and she delivered the woman herself. The day following rigors issued in the fever which proved fatal. Ingram was then committed for manslaughter.

In connexion with another lying-in charity, three cases of puerperal fever occurred. In the first instance, no apparent source of infection could be discovered; the woman was attacked on the second day, and died on the seventh day after confinement (December 1st). The linen belonging to the charity was returned, and six weeks afterwards was lent out again. The unfortunate woman receiving it was infected and died; and the midwife attending her infected the next case she attended, though not fatally. This midwife has also been prohibited from practice by the coroner. It may be a matter of doubt whether the coroner acted according to law in taking the course which he did; however, with the evidence before him, which I have stated above, I have no doubt it will be admitted that he acted very wisely, and I have to thank him for so doing, for he has stamped out an epidemic which I (as medical officer of health) found myself unable to cope with for want of power to take the steps which he did. The origin of the epidemic appears to me to be rather obscure. I have seen in our late epidemic of scarlet fever a woman who, for the first week after confinement, lay in the room with two malignant and fatal cases of that fever without hurt. Why, then, should the woman in this instance escape when another is infected? May there not be some meteorological conditions rendering the constitution more susceptible at one time than at another? There is another point of interest with

regard to the mode of infection—viz., the only woman who escaped Ingram's fatal influence was one whose vagina she had not touched. Is it possible that this is the only channel through which the virus is conveyed?—*British Medical Journal*.

(To the Editor of "*The Obstetrical Journal*.")

DEAR SIR,—I think with the addition of a few facts to those published in the *British Medical Journal*, you will have as much information on the subject of the puerperal fever here as I have myself.

I find that thirteen cases came under my notice ; of these eight proved fatal. Three were first pregnancy cases ; these three proved fatal. The remaining ten were women with families ; of these five died.

The disease assumed the character of an active inflammation, rapidly extending over the whole of the peritoneum in most instances, and as a rule set in the day after delivery. There were, however, some anomalies. In one instance a woman was attacked with peritonitis twenty-eight days after confinement, and went through all the stages of a case of puerperal peritonitis. The involution of the uterus had not gone on naturally in this case. In another instance a woman was attacked on the day after delivery with rigors followed by a state of high fever. Death took place on the seventh day, and at the post-mortem there were no appearances whatever of inflammatory action in any of the parts, neither were there signs before death of inflammation. I had myself rather an interesting case of a woman who helped "*to wash and lay out*" the body of a puerperal fever woman ; three days afterwards my patient was attacked with rigors and fever, and sore throat. The following day some spots of a diphtheritic nature appeared on the throat. I saw the woman twice, and on each occasion she was in bed, and the clothes she had worn had been put away. I then attended a case of midwifery, and although my parturient patients up to this had done well, this one suffered from puerperal fever.

This last case, I think, suggests many interesting questions, though being only one case, it does not go to prove much.

Yours, &c.,

M. A. FENTON.

Coventry, February 18th, 1875.

Communications have been received from Dr. Wm. Playfair, Dr. Grigg, Dr. Underhill, Dr. Cullingworth, Dr. Carter, and Dr. Edis.

All communications, books for review, letters, &c. for the Editor, may be addressed to the care of the Publishers, 11, New Burlington Street, London, W.

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